EVERY WEEK: The magazine with most software reviews

Home Computing WEEKLY

An Argus Specialist Publication

No. 41
Dec 13-19, 1983

38p

FREE competition

£1,000-worth of new **MOGUL** software to be won

Software reviews for:
Commodore 64, Spectrum, BBC, VIC-20, Texas, Oric, Dragon

ZX MicroFair: first full report

Fun Spectrum games to play

Type in our VICpen program for great graphics

More programs to type in for:
Texas, ZX81, Oric, Dragon, Atari

PLUS: news, U.S. Scene, letters, software charts

48K ZX Spectrum
Laser Snaker
PATHFINDER
WIDGIT PROGRAMMES FOR YOUNG CHILDREN
16/48K SPECTRUM
Robopods
Shards
STORM ARROWS
Bareldrop

Bible game out for Christmas

Just in time for Christmas, a clergyman has completed a Biblical adventure set in turbulent first-century Israel

Jericho Road was written for the Spectrum by 44-year-old Peter Goodlad, pastor of Seven Kings United Free Church, near Ilford

His Spectrum has been put to use both in church youth groups and during a Sunday service, running two of his earlier games

One asks multiple choice questions about the parables and in the other, called The Lost Sheep, players have to round up the flock.

In Jericho Road, which costs £5 75 from Shards and runs on the 48K model, the player has to

Continued on page 5

Decision soon on "ITV micro"

ITV companies were meeting this week to decide their future policy on computer programmes — and on proposals from some of the companies that independent ITV should produce its own rival to the BBC micro

Reports had claimed ITV had called in micro builder Transam to produce a £400 computer with its own version of BASIC, the new Zilog Z80B processor, 64k or 256k of memory, and RS232

Continued on page 5

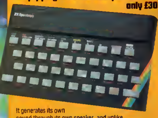
NEW RELEASE

The Guardian

A sound choice for your Spectrum–

A crystal-clear sound module that simply plugs into the user port – only £30

SOUND MODULE



It generates its own sound through its own speaker, and unlike most other types, there is no need for additional programming Make your game playing more exciting, more realistic, make your Spectrum sound output music to your ears Also available for the BBC micro at £30.

and a FREE choice of £30 software!

Buy the sound module and choose £30 of software free!

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3D Star Wars *Battle an entire rebel space fleet £5*

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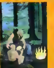

The Roundsby Incident *What is Roundsby's secret? £10*

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Goolin Crusher £5

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Lost over Bermuda

Lost Over Bermuda *Will the Triangle claim you? £5*

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*** 16K Spectrum – everything else 48K All prices include p & p + VAT. UK only**

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24 PAGES OF SPECTRUM BEST
Send 50p stamp to:
Software Supermarket,
87 Howard's Lane,
London SW15 6NU

Tansoft has brought out its Oricmon machine code monitor, which includes an assembler and disassembler. Other features are printer and cassette handling, trace, slow motion run, and breakpoints. The package comes with a 50-page user guide.
Price £15

Tansoft, Units 1 and 2, Techno Park, Newmarket Road, Cambridge

Melbourne House has now taken over publishing rights to Abersoft Forth. Programs in Abersoft Forth are said to run 10-15 times faster than BASIC programs, without the need to learn machine code. Price £14.95

Melbourne House, 224 Stanley Road, Teddington, Middx TW11 8UR

Fidelity has moved into the home computer market with a 14 inch colour monitor which it says will work with virtually any computer or games machine. It will accept a range of inputs, including RGB, RGBY or composite video, plus audio, via a 21 pin scart type socket. It costs £200

Fidelity, Victoria Road, London NW10 6ND

Taxman from Mondatta isn't a business program — it's a game where you gather as much money as possible while avoiding the tax men's clutches. Also out from Mondatta is Supercopter which gives you a chance to save your country from destruction. Both games are for the Commodore 64 and cost £5.65

Mondatta, 38 Cuddington Ave, Worcester Park, Surrey KT4 7DB

From Pan, the people who brought you the 35mm Photographer's Handbook, comes The Personal Computer Handbook. Costing £5.95 in paperback and £9.95 hardback it has chapters on the elements of a microcomputer system, how your micro works, living with computers, the electronic home, the electronic office, and computers in the future. A glossary and buyer's guide (already slightly dated) is included

Pan Books, Cavaye Place, London SW10 9PG

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Acting Editor
Paul Liptrot
Assistant Editor
Candice Goodwin
Designer
Bryan Pitchford
Managing Editor
Ron Harris

Divisional Advertisement Manager
Coleen Pimm
Assistant Advertisement Managers
Ricky Holloway Stuart Shield
Classified Advertising
Debra Stupple
Chief Executive
Jim Connell

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To advertise
your latest products!
Ring Coleen or Barry on
01-437 1002 NOW!

You'll smile too when you play the three Spectrum games in this issue

SCHOOL MAZE

Programs for children are reviewed on page 53

Let your Dragon work out your bills in advance — just type in the listing on page 13

EARLY WARNING: We're moving. We move into our new offices on December 20. The address: No. 1 Golden Square, London W1R 3AB. Our phone number will then be: 01-437 0626.

More than fun and games!

FIRST STEPS with the Mr. Men

by Primer Educational Software

The ever-popular Mr Men help prepare young children for reading with four simple and absorbing games designed to exercise essential skills as well as entertain.

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book featuring the Mr. Men For ages 4 to 8 years Available now on cassette for the BBC B (Spectrum 48K and Electron versions coming shortly) **£6.95**

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by Widget Software

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Available now on cassette for the Spectrum 48K and Commodore 64 (BBC B and Electron versions coming shortly) **£6.95**

CAESAR THE CAT

by Andromeda Software

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Bible game

From front page

survive the rigours of Roman occupation and religious persecution in southern Israel

He has a special mission on behalf of a persecuted minority and has a part in decoding an ancient puzzle.

Mr Goodlad said "I'm a great believer in modern technology in the church, but it must be appropriate. The computer is a tremendous tool, but you've got to use it and not be dominated by it"

How had his congregation reacted? He said "I think they are a bit bemused by it, but they have been very supportive. After all, I've found another way of expanding my ministry"

The Rev Peter Goodlad — believes in computers in the church

Mr Goodlad bought his Spectrum a year ago — with a lot of encouragement from his three daughters — and one of the first uses he found was for church records

He said "I started off thinking that was the way I was going to use it. But in order to be functional you've got to keep it up to date and I got diverted to educational games. Maybe after Christmas I'll restore the records"

Daughters Alison 17, Julie, 14, and 12-year-old Sally are delighted at their father's success

Mr Goodlad said Alison had written some small programs and gave advice on Jericho Road

But he said of his wife Jean "She accepts it in the house but does not want to get involved — she's got enough to do"

Mr Goodlad plans to buy a full-sized printer with his royalties

His future projects include a compendium of the best of the programs he has used in church work and further adventures based on the Bible

He said "There will be at least one sequel. I would love to create something out of the Book of Revelations. It has some incredible imagery and dramas"

Steve Maltz, of Shards, contacted Mr Goodlad after seeing him on TV

He said "He's the first real churchman to take a public interest in computers. I think it's a good thing — even if you don't look at the Christian side of it

He's taking history and turning it into an adventure with real people

"We are planning a few more adventures you can believe in"

Mr Maltz said he and his wife Monica did not belong to any denomination, but thought of themselves as religious

Shards Software, 189 Eton Road, Ilford Essex IG1 2UQ

JERICHO ROAD
From SHARDS

Jericho Road — set in turbulent times

ITV micro

From front page

and Centronics interfaces

It would also have floppy and hard disc ports, a Prestel interface, and the ability to download telesoftware

Commenting on the reports, David Shaw of the Independent TV Companies Association, said "The question of the involvement of ITV as a whole in computer programmes has been looked into. The crucial factor is what the IBA would think because the IBA has to approve any action of this kind

"The IBA has now given its response, and its reply is due to be considered when we next meet

"Supposing the response was yes, that wouldn't be the whole story by any means. There are 15 companies in the association, and they've all got to agree

"Certainly five or six companies are very much looking at the concept of producing ITV computer programs, and some people within certain companies have mooted the idea of an ITV micro. But some other companies don't think it's appropriate. After all, we do have our advertisers to consider

"The reports about an ITV micro have jumped the gun. They've given a fair description of some of the proposals we've received, but it's all speculation at this stage"

Tom Hohenberg, of Acorn, when asked what he thought about the rumours, said "There won't be an ITV micro. It's highly unlikely that all the ITV companies would be able to agree on a specification and marketing strategy. But I expect that individual companies will be doing their own thing, bringing out computer programmes based around existing micros — maybe including the Electron"

"It's a bit late to think about bringing out a new machine now. We've had enough production problems — we should know"

He admitted, however, that "the bubble shows no sign of bursting, and sales of the BBC micro are booming"

All Transam had to say was "We're not allowed to say anything about it"

Briefly

For working BBC micros Alligata has brought out three utility programs: Flexibase, Alligatacalc and Scribe II. They cost £9.95 each, and disc versions are available for Flexibase (£13.95) and Scribe II (£14.95)

Alligata, 178 West Street, Sheffield S1 4ET

New software house Solway has brought out two double game tapes for the TI 99/4A — System Trader at £5.55 and Cruiser (£4.55). Texas withdrew from home computers just two weeks before Solway was launched — too late to change course — so the firm is now thinking about writing for another computer too

Solway Software, 6 Curzon Street Maryport Cumbria

Sunshine has brought out Graphic Art on the Commodore 64 which helps you to develop a high res turtle graphics system. Written by Boris Allan, it costs £5.95

Sunshine, 12 13 Little Newport Street London WC2R 3LD

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If more programs shared the quality of OMNICALC then we might see more Spectrums in offices
Home Computing Weekly 3/5/83

It is ideal for someone who has just found the spreadsheet concept but it is also a very powerful tool for anyone who has used one previously
Sinclair User June 1983
Complete with comprehensive manual **£9.95**

ZX-SIDEPRINT (Spectrum & ZX81 versions)
Use ZX Sideprint to print sideways, giving you 80/132 etc characters per line
(State version reqd) **£4.95**

CREVASSE & HOTFOOT (any Spectrum)
Can you make it across the ice-cap whilst chasms open and close all around?
Or help the rabbit get to fields full of carrots – but remember! the plumper the rabbit the greater the danger
2 original games for only **£4.95**

NEW! **THE TRAIN GAME** (any Spectrum) **NEW!**
First there were model railways then there were computers. Now Microsphere gives you both in one
Featuring passenger, goods & express trains, tunnels, viaducts, points, stations, turntable, bonus games, collisions, derailments, irate passengers and everything else you expect from a major railway!
Two track layouts on each cassette. Superb value for money
Only **£5.95**

Fun in a bun

Ocean Software took over a software idea from the States for its beefy new game Mr Wimpy.

According to Ocean's MD David Ward: "In the States, all consumer items from MacDonalds to Kool Aid and Coca-Cola have been put into a computer game. The manufacturers regard it as good promotion. But it's still a new idea here."

Ocean's game includes the Wimpy logo and advertising jingle. The player has to help Mr Wimpy make hamburgers, while fending off Waldo the burger thief and kitchen rebels Oggy Egg and Syd Sox with a pepper pot. It costs £5.90 for the 48K Spectrum.

David Ward said: "At first, we though we were going to have to pay Wimpy a royalty for using the name. But when they saw the finished product, they liked it so much that they said we could use the name free, because it would be good advertising for them. And I think it will be, because the game is already selling fantastically well."

Wimpy even plans to sell the game in its hamburger shops over Christmas.

Now Ocean is following up Mr Wimpy with other games based on famous names.

It has just launched Royal Birkdale, a golf simulation based on the well-known Southport golf course, which went down well with the club members themselves.

"They were there in their blazers with gold buttons, stabbing away at the Spectrum keyboard", David Ward recalled.

And Ocean is negotiating with two other well-known companies to launch programs along the same lines early in the new year.

Ocean, Ralli Building, Stanley Street, Manchester M3 5FD

Mr Wimpy — the hero of Ocean's new computer game

Briefly

House of Death, a new game for the Oric, is a follow up from Tansoft of its Zodiac adventure. A text adventure costing £9.99, House of Death takes place in a disused film set where a werewolf, Dracula, a witch and other unpleasant characters try to stop you leaving. Defence Force is a space shoot 'em-up game at £7.95. Both games are for the 48K Oric and are from Tansoft.

Tansoft, Unit 1, Techno Park, 645 Newmarket Road, Cambridge CB5 8PB

Five new games from Abacus: Proteus, Fireflash, Munnery's Mergatroids, Galactic Warriors and Super Digger. All the games cost £5.95 each, and each include a second BASIC game on the B side. Proteus and Fireflash are also sold along with Abacus's Sentinel and Avenger in a £14.95 gift pack.

Abacus, 716 Llangyfelach Road, Treboeth, Swansea SA5 9EL

Soft Shop is the name of yet another new chain of software shops, which will be springing up all over the Home Counties over the next few months. The first shop opened in Chalfont St Peter last November. The idea is for the shops to stock a wide range of software and accessories for different machines. Trained staff will be in attendance, and customers will be encouraged to try programs out in the shop before they buy.

Soft Shop, 10 Church Walk, Chertsey, Surrey

Smiths will soon be stocking the AMS 3 inch disk drive for the BBC micro. The drive is available in a single 100K format at £225 or a 200K format at £399, and runs off the BBC power supply.

AMS, Woodside Technology Centre, Green Lane, Appleton, Warrington, Lancs

Dynatech has launched Home Filewriter, a do it yourself database program, for the Commodore 64 or Atari plus discs. You can type in the screen layout you want using ordinary English commands which the computer translates into code. The program comes with a demonstration disc, and costs £39.95.

Dynatech, Rue du Commerce, Bouet, St Peter Port, Guernsey, Channel Islands

Your micro can put on a slide show

Here's some news about a novel and exciting program available for the VIC 20 and Commodore 64. It is called Color Craft and can be used to allow the computer to put on a "slide show" or otherwise present variable time screen displays of text and graphics.

Using the graphics keys, you design screen displays which are then stored. Prior to playback, you decide how long each screen will be displayed. This can create animation and/or cartoon-like effects.

The maximum number of pages available depend upon the obvious factors of screen detail and available memory. For example, a 16K VIC can store from 12 to 50 pages, each page being five characters by 10 lines, whereas a 64K 64 can store as many as 25 full screens (21 by 40). According to reports, the program is even more useful and educational than its advertisements would have you believe. This is a real treat compared to the usual situation.

It is easy enough for most children to use, and is flexible enough to allow real creativity. It is apparently well error proofed and supplied with very good documentation.

If you are into graphics and/or want to design your own custom screen displays without a lot of hassle this may be just the thing for you. The programs are bargain priced too. Cassette or disc versions are available. Prices: $24.95 for VIC and 64 tape versions or $29.95 for 64 disc. Further details are available from Sim Computer Products, P.O. Box 7, Miqnon, PA 19452 (215) 825 4250.

★ ★ ★ ★

Tandy has announced a printer for the Colour Computer. The unit is set to retail for $99.95! It is called the TP 10, and is a thermal printer which prints a quiet 32 characters per line at 30 characters per second. Special thermal paper is of course required.

It will work with both the MC 10 Micro Colour Computer as well as the regular Colour Computer. Rolls of thermal paper, four and one half inches wide, are also available from Tandy and will cost about $3.95 for a package of two rolls. The printer is capable of printing out 95 standard ASCII characters as well as 16 block graphics characters. See your local dealer for more details. Sounds like a reasonable value.

★ ★ ★ ★

This item is included more for its humor value than anything else. Several years ago a rash of articles appeared in all the electronics technical magazines which all said about the same thing.

They were devoted to instructing the clever DIY person as to how to wire their regular television set so that their computer could send it direct video.

The result of the modification was the installation of jack on the outside of the set coupled directly to the video amplifier.

This made superfluous the use of a modulator and did much to improve the quality of the computer display. Most of these articles appeared long before the advent of the low cost VDU.

Well, now a firm in San Jose has started to market a little device which they call a tuner adapter. It connects to any monochrome or color computer monitor and, guess what? turns it into a television set!

One of the selling points the firm uses is that for about one third the cost of a color set, buyers can have a spare television.

What is really amusing is that monitors themselves cost so much more than televisions and have so much less circuitry inside.

So now computer users can pay at least one third more for a monitor than a comparably sized television and then pay an addition third to turn their monitor back into a television.

This all makes perfectly good sense if you live out here where I do.

Out of room once again. See you next week.

Bud Izen
Fairfield, California

Free: £1,000 worth of new MOGUL software must be won

JUST find the words and a share of £1,000-worth of software could be yours

We have got together with Mogul, the new force in computer software for this week's competition

The 46 winners will receive a prize package of tapes worth about £22 for three of the most popular computers — the Spectrum, VIC 20 and Commodore 64

Mogul Software, a division of video company Mogul Communications, made its debut in November with both U.S. best sellers and a range produced in Britain

How to enter

The word square below contains the names of a number of Mogul software titles. They are horizontal, vertical and diagonal

All you have to do is mark them clearly in ballpoint pen, including your computer — so we know which prizes to send — and the number of titles you found

All the titles in the square, plus several more, are in this list

Metamorphosis
Zeus
Creator's Revenge
Super Trek
The Great Adventure Pack
Potty Planter
Las Vegas Lady
Tiny Compiler
Kongo Kong
Earthquake
Pyramid
Pollywog
Crash
Anuibilator
Maths Tutor

When you have completed the word square and the coupon, cut around the broken lines and enclose the attached two in an envelope addressed to Mogul Software Competition, Home Computing Weekly, No. 1 Golden Square, London W1R 3AB

This is our new address from close of business on December 19

Important you must also write on the back of the envelope the number of software titles you found. Any without this will be discarded

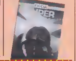
Entries close at first post on Friday December 30

You may enter as many times as you wish, provided each is on the official word square and coupon, not copies, and in a separate envelope

The winners will be the first 46 correct entries opened, regardless which of the three computers have been marked on the coupons

The solution and the names of the winners will appear on the news pages of Home Computing Weekly and the prizes will arrive from Mogul within 28 days of that issue

Are you good with words? See how many Mogul titles you can find in our word square and you could be among our 46 winners of great new software



The rules

The first 46 correct entries drawn will win the prizes. Coupons which are not fully completed and envelopes without the number of differences found on the back will not be considered

Entries close at first post on Friday December 30 1983

Entries will not be accepted from employees of Argus Specialist Publications, Mogul and Alabaster Passmore & Sons. This restriction also applies to employees' families and agents of the companies

The winners' names and the solution will appear in Home Computing Weekly. The editor's decision is final and no correspondence will be entered into

Mogul Software Competition
Entry Coupon

Name ______________________________

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Computer ______________________________

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Please complete carefully and post to Mogul Software Competition, No. 1 Golden Square, London W1R 3AB. Closing date: First post Friday December 30 1983

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T	C	R	E	Y	P	Q	E	M	B	D	K	M	H	G	F	D	S	M
U	P	B	M	E	V	O	R	A	V	D	P	T	E	O	J	B	I	C
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Q	I	M	U	R	H	W	E	W	Y	Y	Z	S	V	B	N	H	I	J
U	I	A	P	O	S	T	K	E	X	P	B	O	G	P	Q	M	P	R
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It's Only Rock 'n' Roll
Tomb Of Dracula
Spectrum 48K

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2 **Tomb Of Dracula** Darkness is falling The vampires are hungry You can't go back. Your only chance of survival lies ahead

The walls are cold and clammy With each step you remember the horrors ahead, ghouls, zombies and pits of choking slime In your hand you have but seven silver stakes with which to defend yourself Dare you face the ultimate evil and win

from — three suitable for the ZX Spectrum and two for the Commodore Vic 20 — and there are more to come. So hurry to the shops now and see for yourself how K-tel Doublesiders really do give you twice the fun with two on one.

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Messing about on the water

We look at a selection of games with watery themes

Shark Attack
Spectrum
£5.99

Romik, 272 Argyll Avenue,
Slough, Berks

Just when you thought it was safe to go in the sea again, Romik introduces Shark Attack.

You must surround sharks with a continuous net to prevent them eating you or the octopuses. If a shark eats an octopus, it can eat the net and this creates a bit of bother.

Three skill levels are provided, and the cassette mentions that the game works with Kempston or Sinclair joysticks. Sinclair joysticks? Does Romik know something we don't know?

When the sharks finally finish you off, you are asked to enter your initials for the Hall of Fame, however to do so, you are asked to use the fire button. What fire button? Until this stage there is no mention of a fire button.

Is this a casualty of the Christmas rush, where subroutines are lifted wholesale from previous efforts and simply tacked on? Pretty poor and unprofessional if you ask me!

Despite the underwater setting this game is too derivative to excite even the most unjaded of palates.

Try throwing yourself on the sharks for a change, the graphics and sound effects for a 'kill' are quite good! **M.B.**

instructions	40%
playability	70%
graphics	70%
value for money	70%

★ ★ ★

Hop It!
TI-99/4A
(Extended BASIC) £6.95

Lantern Software, 4 Haffenden
Road, Tenterden TN30 6QD

Yet another game of Frogger and by far the poorest that I have seen, the more so since the use of Extended BASIC and sprites confers the potential for an excellent imitation.

What lets this program down very heavily is the appalling keyboard response, giving delays of up to a second.

The worst is when attempting to cross from a log to a turtle. The delay here is inconsistent, which introduces an element of chance into a game which is otherwise dependent upon manual and intellectual skills.

Although the task of getting a frog across a road and a river to a pool, avoiding hazards on the way, is not timed, it is a good graphical imitation of the real thing.

There are turtles which submerge if you leave the frog on them for too long, so if you're not a quick decision maker you could take a long time to build up a score.

Land in a pool containing a fly and you get bonus points, and when all the pools have frogs in them you get an extra frog and the game speeds up. **P.B.**

instructions	65%
playability	35%
graphics	85%
value for money	60%

★ ★ ★

River Rescue
48K Spectrum
£7

Thorn EMI, Upper St Martin's
Lane, London WC2H 9ED

River Rescue is a kind of waterborne Scramble/Penetrator game.

You have a bird's eye view of a river and its banks which scroll across the screen. Your task is to pilot your motor gun boat avoiding islands and crocodiles.

If you manage to shoot the crocs you gain points, if you hit them, you sink!

Every now and then you have the opportunity to collect explorers from the north bank and deliver them to the south, and gain more points.

The more explorers you collect, the more the program offers extra scoring facilities, get really good and two planes start to bomb you in addition!

The game is incredibly fast and furious as there is no skill level adjustment, which I rate as a disadvantage.

There are other snags too, the boat tends to crash when it's near an obstacle rather than being in contact with it, the animation is rather crude and the sound dull and repetitive.

I suppose I expected a large company like Thorn-EMI to produce a program which was technically superior to those of the small software houses.

The question must be asked, are you paying an extra pound or so for a flash inlay card and large corporate overheads? **D.M.**

instructions	100%
playability	60%
graphics	60%
value for money	60%

★ ★ ★

Ship of the Line
Commodore 64
£6.50

Richard Shepherd Software, 3-25
Elmshott Lane, Chippenham,
Slough, Berks

Up to now Richard Shepherd has concentrated on the Spectrum, so this program represents an excursion into new fields.

Quite simply, you control a sailing ship and endeavour to gain promotion by sinking or capturing enemy ships. You set sail with a full complement of men, food and ammunition and search for the enemy.

One word commands such as go-on, attack, engage, port etc to manipulate your ship. Enemy ships can be attacked but if you elect not to attack they will pursue you.

During an attack you can sink or board the ship and gain points.

Throughout the voyage you are subjected to sundry mishaps such as mutinies, scurvy, bad food and yellow fever. This generally depletes your food, men or both.

It is wise to return to port occasionally to replenish your ship. If, on return to port, you have enough 'hero' points, you will be considered for promotion. Promotion will finally depend on a ridiculously banal test.

Overall, not a wonderful game. Graphics were mediocre and sound was appalling. The game didn't do justice to the power of the 64.

Basically a good idea which lacked imagination and thought. **A.W.**

instructions	60%
playability	60%
graphics	50%
value for money	60%

★ ★ ★

Angler
48K Spectrum
£5.95

Virgin Games, 61/63 Portobello
Road, London W11

You have 100 casts to catch as many fish as possible. The fish move smoothly from side to side in 18 rows, and you can move your boat along the surface of the sea.

It is very difficult to catch the fish, because it is hard to cast the line in the correct position.

To catch the fish in deeper waters you must also make sure that the line doesn't hit any fish on its way down, otherwise the line reels back, so it's a wasted cast.

I found it practically impossible to catch the deeper fish, even on the easiest of the five skill levels.

If you catch a crab you lose a point with each cast. However the smaller version of the meanest-looking fish will eat all your crabs — if you manage to catch one!

Every go you must type in your name — it would be better if you only had to when you get a high score. You can make a printout of the Hall of Fame or Certificate of Merit — they are shown with each score.

It is so difficult to catch the fish that you tend to lose interest quickly — a bit like real life fishing. **S.E.**

instructions	80%
playability	35%
graphics	60%
value for money	40%

★ ★

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Can you tell the time?
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Make 10,000 different faces
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Railroader

Money an introduction to coins and notes and their use in shopping 4-10 yrs (Spectrum 48k)

Missing Words watch the train move forward when you type in the right word 4-10 yrs (Spectrum 48k)

Maths Invaders answer the questions correctly or the invaders will land on you 4-12yrs (Spectrum 16 48k BBC B Electron)

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Time learn to tell the time with this simple step by step guide 3-10yrs (Spectrum 48k BBC B Electron)

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Horace Goes Skiing	† Pssst
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Penetrator	† Invaders

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Newcastle-upon-Tyne NE1 4PZ

The Computer Centre (Humberside) Ltd
26 Anlaby Road, Hull HU1 2PA

Here's how to ease the shock of those bills

Prepare for the worst with A. Lee-Bentley's program for the Dragon. It will work out your gas and electricity bills before the buff envelopes arrive

Do you find your power bills difficult to believe? Now you can check them — and get the bad news earlier

My program, for the Dragon 32, works out gas and electricity bills and all you have to do is to follow the prompts

You will be presented with a menu of three choices gas, electricity or end of program

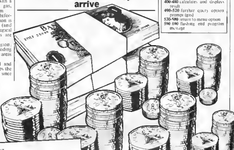
The first is quite straightforward but gas bill calculation is slightly more complex (and confusing) due to the illogical way in which these bills are calculated.

In the south east region, variable G will be .28p (standing charge per week), but other areas may differ.

Look on your gas bill and divide the standing charge by the number of weeks elapsed since the last reading.

How it works

5-100 display menu
110-180 set variables for electricity bill
190-260 calculate, display result
270 300 further query option prompt (elec)
310-390 set variables for gas bill
400-480 calculates and displays result
490-520 further query option prompt (gas)
530-580 return to menu option
590 690 flashing end program message



```
5 REM BILL CHECK/CALC
6 REM A. LEE-BENTLEY 1983
10 CLS:PRINT@14,"MENU
20 PRINT@46,"----"
30 PRINT@100,"(1) ELECTRICITY BILL CALC.
40 PRINT@132,"(2) GAS BILL CALC."
50 PRINT@164,"(3) END PROGRAMME"
60 PRINT@393,"INPUT(1-3)"
70 A$=INKEY$:IFA$="" THEN70
80 Z=ASC(A$)-48
90 IFZ<1ORZ>3 THEN70
100 ON Z GOTO110,310,590
110 CLS
120 PRINT@2,"ELECTRICITY BILL CALCULATION"
130 PRINT@34,"----------------------------"
140 FORI=0TO500:NEXTI
B342 PRINT:INPUT"ENTER PRESENT READING";A
160 INPUT"ENTER PREVIOUS READING";B
170 INPUT"ENTER PRICE PER UNIT";D
180 INPUT"ENTER STANDING CHARGE";E
190 CLS:PRINT@2,"electricity bill calculation"
200 PRINT@34,"----------------------------"
210 C=A-B:T=C*D+E
220 PRINT@64,"METER READING   UNITS   COST"
230 PRINT@96,"LAST PRESENT  TOTAL  AT  #  .  P"
240 PRINT@128,"....  .......  .....  ..  .  ......"
250 PRINT@160,B:PRINT@165,A:PRINT@174,C:PRINT@179,D:PRINT@184,"$";T
260 FORI=0TO800:NEXTI
270 PRINT@262,"FURTHER QUERY(Y/N)?"
280 K$=INKEY$:IFK$="" THEN280
290 ON INSTR(1,"Y",K$)GOTO110
300 ON INSTR(1,"N",K$)GOTO530
310 CLS
320 PRINT@5,"*GAS BILL CALCULATION*"
330 PRINT@37,"----------------------"
340 FORI=1TO800:NEXTI
350 PRINT:INPUT"ENTER PRESENT READING";A
360 PRINT:INPUT"ENTER PREVIOUS READING";B
370 PRINT:INPUT"ENTER WEEKS SINCE LAST READ";D
380 PRINT:INPUT"ENTER PRICE PER THERM";F
390 PRINT:INPUT"ENTER STANDING CHARGE";G
400 CLS:PRINT@5,"*gas bill calculation*"
410 PRINT@37,"----------------------"
420 C=A-B:P=C*F
430 H=P/D:X=C/D:Y=X/10
440 J=(G+Y+H)*D
450 PRINT@65,"METER READING   UNITS   COST"
460 PRINT@96,"LAST PRESENT  USED  AT  #  .  P"
470 PRINT@128,"....  .......  ....  ..  .  ......"
480 PRINT@160,B;"":PRINT@166,A;"":PRINT@174,C;"":PRINT@179,F;"":PRINT@185,"$";J
490 PRINT@262,"FURTHER QUERY?(Y/N)"
500 IC$=INKEY$:IFIC$="" THEN490
510 ONINSTR(1,"Y",IC$)GOTO310
520 ONINSTR(1,"N",IC$)GOTO530
530 CLS
540 PRINT@230,"RETURN TO MENU?(Y/N)"
550 E$=INKEY$:IFE$="" THEN540
560 CLS
570 ONINSTR(1,"Y",E$)GOTO10
580 ONINSTR(1,"N",E$)GOTO600
590 CLS
600 PRINT@204,"THANK YOU   *"
610 PRINT@265,"HAVE A NICE DAY*"
620 FORT=0TO400:NEXTT
630 PRINT@168,"****************"
640 PRINT@200,"*              *"
650 PRINT@232,"*              *"
660 PRINT@264,"*              *"
670 PRINT@296,"****************"
680 FORT=0TO400:NEXTT
690 GOTO600
```

LUNAR JETMAN
ULTIMATE PLAY THE GAME
COOKIE
TRANZ AM
PSSST
JET PAC
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ATIC ATAC
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LUNAR JETMAN – 48K ZX Spectrum

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Playing at the speed of byte

This week's roundup of action games for a range of micros

House of Bugs TI-99/4A (Extended BASIC, Joystick) £5.95

Temptation Software, 27 Cinque Ports Street, Rye, Sussex

Happily, the only bugs to be found in this program are those to be seen jumping around the screen in the House of Bugs.

The house has a basement, ground, first and second floors and a roof. By controlling your man, one of four, a high score must be obtained by climbing ladders to the upper floors.

Lingering on lower levels results in points being deducted.

When the game starts, the four resident bugs are to be found on the roof.

As play progresses, some will descend the ladders, eager to leap on to your head.

Your only protection is to jump to the ceiling and drop down on the bug as he passes. This will gain bonus points, but once a square of ceiling has been damaged it cannot be used again until re-plastered.

Repairs are only carried out when the score reaches 300. For every 600 points gained, the second floor ceiling is repaired and you earn an extra man.

While plastering is in progress the bugs go wild, so whether it's you or those bugs that are hopping by the end of the game depends on how fast those reactions are!

J.W.

instructions	90%
playability	80%
graphics	90%
value for money	90%

★ ★ ★ ★ ★

Rood Tood Commodore 64 £8.95

Audiogenic, 34-36 Crown Street, Reading, Berks

No home computer, it seems, is complete without its own version of the arcade favourite, Frogger. This release for the 64 is guaranteed to keep arcade fanatics happy for hours.

For those hermits who have never actually played Frogger, the basic idea is to guide a green frog across a road avoiding fast cars, and through a crocodile infested river.

To cross the river requires skill, leaping on to moving turtles and logs, while avoiding the crocs.

As the game progresses, snakes will appear by the road side and attempt to eat your frog, and the pace gets much faster.

Leaping on to a female frog gains bonus points, and once four frogs have been safely housed in the safe areas at the top of the screen, a new sheet begins.

I particularly liked the graphics on this game — the frog moved very realistically. But the instructions, which assumed that the owner has played Frogger before, were a little confusing.

Anyone who likes Frogger will find this version extremely satisfying.

D.A.

instructions	60%
playability	75%
graphics	95%
value for money	70%

★ ★ ★ ★

Storm Arrows Dragon 32 £7.95

Dragon Data, Kenfig Industrial Estate, Margam, Port Talbot, W. Glamorgan

The object of this game is to shoot the deadly arrows that are flying in all directions around a maze.

Tactics are required, however, because "master arrows" appear and lay eggs on the grid.

These eggs hatch as you shoot the last two arrows. If you successfully clear all the hostile arrows, a new screen is presented in different colours.

Before play starts, you are asked to input three initials for the high score table displayed at the end of the game. Since I have only two initials, I found that I had to invent a third one!

A good point is that a new name can be input before each round if required by pressing Enter.

There are many other good features, including on screen scoring with high score, time and round bonuses, and extra points for certain hits.

The graphics are smooth and fast and the game is fun to play and addictive.

The sound is reasonably good with a satisfying twang when a laser is fired. There are no melodious tunes, though — unlike many of the new arcade games.

E.C.

instructions	90%
playability	90%
graphics	90%
value for money	90%

★ ★ ★ ★ ★

Borreldrop 48K Spectrum £5.95

Games Machine, Business and Technology Centre, Bessemer Drive, Stevenage, Herts SG1 2DX

An unusual game written in BASIC which shows what the Spectrum is capable of without recourse to machine code.

The main section is a variation of Bagatelle. Your character, Gordon, rolls barrels along the roof. When you press space they fall to the ground.

If you press when the barrel is immediately over a drainpipe you unblock it. Your task is to unblock five drains.

Sometimes if you miss, Gordon's dog Flash will retrieve the barrel and give you another try.

If you succeed in unblocking all five drains then you get a "surprise" before the next sheet in the form of an unrelated problem or game, for example, mini Space Invaders.

Colour, sound and graphics are all reasonably well used but unfortunately for Games Machine the big boys have set the standards of animation which we expect from a commercial program.

Although this is a competent and enjoyable game it lacks polish, each of the sections are of the standard of good magazine listings.

But younger children or inexperienced gamers would enjoy this game.

R.E.

instructions	80%
playability	60%
graphics	59%
value for money	60%

★ ★ ★

Laser Snoker 48K Spectrum £5.95

Poppy Soft, The Close, Common Road, Headley, Newbury, Berks

I have seen one or two variations of games where a player has to guide a snake round an obstacle course and this is one of the best I have seen so far.

Although it may seem easy, I can assure you that it is [illegible] — even at Trainee level and difficulty 0, which is my level.

There are 15 sheets or playing areas to get through, and after two hours I managed sheet 9, but my fingers refused to cooperate any more.

As an incentive, there is a prize if you manage to complete sheet 15. If you manage this at speed 9, for expert, and difficulty 4, then I would suggest that the prize is a six month stay in a psychiatric ward to recuperate!

The cursor control keys move the snake round the playing area, and if you should need a rest — and you will — then key P will hold the game for you. Key 0 fires a burst of venom at whatever gets in the way of the snake.

You should have no problems with loading, but I would suggest that you only load this game when you have at least a couple of hours to spare.

Although the graphics are nothing to write home about, the display is pleasing enough, and the snake movement is very smooth.

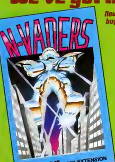
Not too fast, and not too slow, I found it a very playable game.

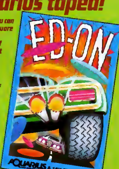
B.B.

instructions	100%
playability	100%
graphics	75%
value for money	100%

★ ★ ★ ★ ★

We've got the Aquarius taped!





Now for the first time you can buy cassette based software for your Aquarius. All the excitement of arcade type action at the low, low price of £5.95.

'N' Vaders

The classic arcade golden oldie but written in machine code for fast exciting action. Pit your wits and skills against squadrons of coloured weirdos. Blast them all from the sky – but beware, they get faster and meaner

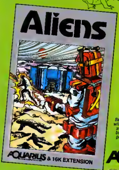
Ed'on

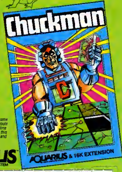
Eat the dots and avoid the planes to win through. An updated version of the addictive arcade game. Accelerate, decelerate, dodge and change lanes. If you manage to avoid destruction you go on to higher things

JUST RELEASED

Phrogger

A leap in front of all other versions — an arcade quality game with truly amazing graphics. Hop, skip and jump across all the dangers and perils. Take your life in your controls to reach safety





Aliens

You are one of the chosen Gatherers, selected by your unique abilities and talents. Probe the mysteries of the past times' building. Gather the secrets of the Universe. Have you the mental strength to survive and the character to win?

Chuckman

Based on the ever popular arcade game with extra extras. Find the quickest route, avoid the meanies and defuse the time bombs to win the day. But beware, this game is addictive... you'll risk sleep and peace of mind

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Turning turtle

Turtle graphics — without a Super Expander? Alan Wilburn explains how it can be done — and on any VIC-20 with 3K or 8K memory expansion

The lack of the necessary graphics commands and the cost of a Super Expander cartridge inspired this program to allow high resolution drawing on the VIC-20. Before starting to write the program, I decided to meet two requirements.

Firstly, the program had to draw complex shapes using a minimum of commands, with the emphasis on ease of use. Secondly, the program had to be compatible with both 3K and 8K memory expansion.

The first requirement was easily met by using the 'turtle' technique. This is an imaginary pen that can be moved around the screen with two simple commands — turn (x) and draw (x). By repeatedly using these commands, complex shapes could easily be programmed.

At first, the second requirement seemed harder to meet. The high resolution screen uses most of the user RAM from $ 1000 to $ 1E00, so storing the program in the 3K expansion area would have made it inaccessible to machines with only 8K expansion and vice versa.

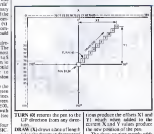
The solution was to reduce the size of the high resolution screen and store the VICPEN routines just below the normal screen location from $1C00 to $ 1E00, making it accessible to VICs with either 3K or 8K expansion (see Figure 1).

The program itself assigns four extra commands to VIC BASIC. Listed below is a brief description of each command.

VICPEN switches on the high resolution screen and points the pen upwards ready to draw

PEN X,Y (x=0 to 151 Y=0 to 159) sets the start position for the draw command and can also be used to plot an individual pixel

TURN (X) (X=0 to 255) turns the pen through X degrees from its current direction. Greater angles than 255° can be programmed by using the command twice, ie. TURN (0). TURN (90)=270°



TURN (0) returns the pen to the UP direction from any direction

DRAW (X) draws a line of length (x) in the direction determined by the command TURN (x). The value of X defaults to screen limits (151 and 159)

Consider the Demo 1 program along with its graphical representation in Figure 2.

The start co-ordinates of the pen are stored in addresses $F8 and $FC by the command PEN 76,80. The turn routine converts the 45° angle to radians and stores the result in the floating point store. The Sine and Cosine of the angle are then calculated and also stored as floating point numbers.

The results of these calculations produce the offsets X1 and Y1 which when added to the current X and Y values produce the new position of the pen.

The draw routine merely adds the value of the offsets X1 and Y1 to the X and Y values as many times as determined by the command DRAW (10).

After entering the program, it should be saved before it is run as any errors may hang up the computer. The program will run on any expanded VIC.

However, if more than 3K expansion is fitted, then the VIC should be reconfigured by POKE 642,32: POKE 648,30: SYS64824 before loading and then omit lines 10 and 20.

Demo 2 and Demo 3 are two short routines which demonstrate how the commands are used to draw simple shapes. Line 100 prevents the Ready message from corrupting the display. Pressing any key will return the VIC screen to normal.

Graphic representation of Demo 1

where A = Angle = 45° and L = Length = 0
then X1 = INT (sin (A) *L + 0.5)
X = X + X1
Y1 = INT (cos (A) *L + 0.5)
Y = Y − Y1

Demo 1 (draws a line from center of screen at an angle of 45°)

```
10 VICPEN
20 PEN 76,80
30 TURN (45)
40 DRAW (10)
```

The high resolution screen consists of 152 x 160 plottable points where x = 0 to 151 and Y = 0 to 159

Figure 1

8K expansion	$ 2000
Normal video RAM	$ 1E00
VIC-PEN	$ 1C00
High resolution screen	$ 1000
3K expansion	$ 0400

Demo 2 draws square

```
10 VICPEN
20 PEN 76,80
30 TURN (90) DRAW (40)
40 TURN (90) DRAW (40)
50 TURN (90) DRAW (40)
40 TURN (90) DRAW (40)
100 WAIT 198,7 SYS12
```

Demo 3 draws cube

```
10 VICPEN
20 PEN 40,60
30 FOR X=1 to 15
40 READ A
50 TURN (A) DRAW (40)
60 NEXT
100 WAIT 198,7 SYS12
110 DATA 90,90,90,90,45,45,90,
    45,135,45,135,90,90,140,45
```

```
10 POKE56,28 POKE55,0
20 POKE52,28 POKE51,0
30 FORX=7660TO7679 PEADA POKEX,A NEXT
40 FORX=673TO767 READA POKEX,A NEXT
60 FORX=7168TO7338 READA POKEX,A NEXT
70 SYS7660
80 FORX=7339TO7679 READA POKEX,A NEXT
90 NEW
100 DATA162,7,189 240,29,157,4,3,202,16
110 DATA247,96,0,28,82,28,133,28,134,206
120 DATA7,207,74,29,153,29,170,20,4,29,7,207
130 DATA67,79,76,79,85,210,68,82,65,215
140 DATA80,69,206,86,73,67,80,69,206,84,85,82,206
150 DATA84,73,205,0,0,0,0,0,0,0,0,0,0
160 DATA128,64,32,16,8,4,2,1
170 DATA0,16,160,16,64,17,224,17,128,18
180 DATA32,19,192,19,96 20,0,21,160,21
190 DATA64,22,224,22,128,23,32,24.192,24
200 DATA96,25,0,26,160,26,64,27
210 DATA32,124,197,160,5,185,251,1,240,71
220 DATA201,65,144,64,201,91,176,60,132 177
230 DATA162,0 134 11,56,253 173,2,240,19
240 DATA201,128,240,22,169,173,2,240,39,40
250 DATA3,232,208,246,230,11,164,177,169,200
260 DATA185,251 1,232,208,224,166,177,165,11
270 DATA24,105,204,157,251,1,208,232,185 251
280 DATA1,157,251,1,208,246,164,177,200,208
290 DATA180,96,0,201,255,240,42,36,15,48
300 DATA30,201,204,144,34,40,56,233,203,170
310 DATA132,73,160,255,202,240,0,200,185,173
320 DATA2,16,250,40,245,200,185,173,2,48
330 DATA5,32,210,255,200,245,76,239,198,40
340 DATA76,26 199,32,115,0,201,204,144,25
350 DATA201 210,176,21,32,150,28,76,174,199
360 DATA233,203,10,160,185,162,2,72,185,161
```

```
370 DATA2,72,76,115,0,32,121,0,76,231
380 DATA199,162,0,160,16,24,32,153,255,169
390 DATA30,133,254,134,253,138,168,72,162,19
400 DATA145,253,24,105,10,200,208,2,230,254
410 DATA202,208,243,104,24,105,1,201,11,208
420 DATA232,169,147,141,2,144,169,21,141,3
430 DATA144,169,252,141,5,144,160,0,173,134
440 DATA2,153,0,150,153,0,151,200,208,247
450 DATA169,16,133,254,132,253,152,162,12,145
460 DATA253,200,206,251,230,254,202,208,246,16
470 DATA3,32,150,215,138,208,4,133,250,133
480 DATA249,24,101,250,144,2,230,249,160,133
490 DATA250,165,249,32,145,211,32,15,220,160
500 DATA29,169,251,32,5,219,160,29,162,246
510 DATA32,215,219,32,104,226,160,2,162,205
520 DATA32,215,219,160,29,169,246,32,162,219
530 DATA32,97,226,160,2,162,200,32,215,219
540 DATA96,32,158,215,134,191,169,241,160,29
550 DATA32,162,219,169,205,160,2,32,77,216
560 DATA162,241,160,29,32,215,219,32,73,216
570 DATA32,170,209,192,152,144,2,160,151,132
580 DATA251,169,236,160,29,32,162,219,169,200
590 DATA160,2,32,80,216,70,102,162,236,160
600 DATA29,32,215,219,32,73,216,32,170,209
610 DATA192,160,144,2,160,159,132,252,200,13
620 DATA32,158,215,134,251,32,253,206,32,158
630 DATA215,134,252,165,251,74,74,74,10,170
640 DATA189,218,2,133,253,189,219,2,133,254
650 DATA165,251,41,7,170,189,218,2,164,252
660 DATA17,253,145,253,165,191,240,3,202,208
670 DATA129,130,164,251,32,145,211,162,241,160
680 DATA29,32,215,219,169,0,164,252,32,145
690 DATA211,162,236,160,29,32,215,219,96,0
700 DATA0,0,135,32,0,0,0,135,24,0
710 DATA0,0,0,101,46,224,210,134,101,46,224,210
```

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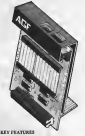

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Alien encounters

Our reviewers guide you through some software encounters of the cosmic kind

Bitmania Commodore 64 plus joystick £6.95

Virgin Games, 61 Portobello Road London W12

This game is hopeless

The instructions rabbit on about neuron flows through the Commodore 64 and other such silliness. The game itself is nothing to shout about, and involves a tiny Space Invaders type of laser base shooting at dots that come whizzing down the screen.

The screen is cluttered by these "neurons" that travel down the screen messing up the display.

The sound is boring, and the graphics are unimaginative and plain.

Apart from this there is not much to say as the game is very simple.

The instructions are in Virgin's usual high standard of packaging.

In this day and age, programs like this are just not on — the software buying public has come to expect more.

Virgin has done better, so why does it have to push this on to the market?

With its flashy packaging and colour pictures on the inlay card it will undoubtedly sell, but when you see the program working — what a let-down. **M R**

instructions	70%
playability	5%
graphics	10%
value for money	1%

★

Cylon Attack 32K BBC £7.90

A&F, 830 Hyde Road, Gorton, Manchester M18 7JD

The term "state of the art" is much over-used in computing, and you should rightly feel sceptical when it is used without thought.

I have thought for quite a while before deciding to describe this game as a state of the art offering.

My reasons for giving it such an accolade are many but basically it comes down to this. I have never seen a better thought out and executed game — nor am I likely to see such an original idea for some time to come.

The aim of the game is the obliteration of various types of alien. I've heard this before you say, but wait.

The aliens appear in an excellent three-dimensional representation before your very eyes. You can move in four directions while they dodge and weave in front of you.

The effects — both sound and vision — are most realistic, and the game can even make you feel motion sick if you play it for long enough.

After the annihilation of each wave you have to dock with the mother ship before the next wave appears.

Look out for the Tardis as you manoeuvre, and don't shoot the Doctor (he doesn't score anyway!) **D.C**

instructions	80%
playability	100%
graphics	100%
value for money	100%

★ ★ ★ ★ ★

Brain Damage Spectrum £5.95

Silversoft, London House, 271/273 King St, London W6

Brain Damage is a rather weird game, similar to the 'tanks' level in the arcade game Tron.

You have to wander around many levels of mazes, shooting up many different types of alien.

The action all takes place inside the brain of the computer, from what I can work out, and, in the style of Imagine and Ultimate, there is a witty little introduction to set the scene.

For example, the first line reads "I was just hanging around, on standby as it were, logic levels at an all time low, my printed circuit bored — my keys depressed. Then you came along."

Brings tears to your eyes doesn't it? The game itself is rather good, actually. Smooth colour graphics and effective use of sound help no end.

It took me a while to get used to the controls, my firing wasn't brilliant and I couldn't get past the third level.

This game takes some skill to play, not just another fire-like-mad-and you might make the twenty-seventh-level game. **P S**

instructions	87%
playability	95%
graphics	90%
value for money	94%

★ ★ ★ ★ ★

Robopods TI-99/4A £6.95

Virgin Games, 61/63 Portobello Road, London W11

An alien spaceship has descended to earth and has beamed down the dreaded Robopods with the intention of destroying our beloved planet.

You are assigned the task of deactivating the fiendish machines before they self-destruct and blow the whole shooting match to kingdom come.

The pods are rendered harmless by climbing up inside them from underneath, but there are a few snags which tend to make life far from simple.

The robopods are all numbered and they must be deactivated in numerical order.

As you make your panic stricken way from one pod to another you leave a trail of radio-active footprints which spell certain death if you pass back over your tracks.

As if that wasn't enough, the ground between each pod is littered with landmines laid by the alien spacecraft.

Stay in one spot for too long, and the pods will blow up anyway.

The only assistance you get is an occasional mat placed over part of your previously laid trail, enabling you to cross your path.

There are five levels of difficulty.

Robopods is a good, well programmed game with excellent graphics and sound. I found it very entertaining. **D B**

instructions	90%
playability	90%
graphics	90%
value for money	90%

★ ★ ★ ★ ★

Startrek 5,000 48K Spectrum £4.95

dk'tronics, 23 Sussex Road, Gorleston, Gt Yarmouth, Norfolk

It would be nice if Scotty could beam you up when you hit a bad patch, but that is one of the few options not allowed in this full version of the old 'Startrek' favourite.

If you do something silly all you get is old pointy ears saying "I am sorry Captain, but your order seems illogical — it must be the stress".

There are plenty of stress moments, flying a starship by the instruments and view on space provided by the scanners, especially when the Klingons are closing in.

I panicked so much, I actually drove the Enterprise into a star — didn't half upset Spock.

A Help function is provided to itemise the numerous orders to the onboard computer — very helpful. I used it a lot.

With practice, I believe you could become quite adept at controlling the ship and perhaps somewhere in the program, there might be a compliment from Spock waiting to get out!

All in all, a competent rendering of a classic game which gives a good impression of how one imagines it would be like, running a starship from the inside. **M B**

instructions	95%
playability	95%
graphics	90%
value for money	90%

★ ★ ★ ★ ★

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How quickly can you think?

Ever played the party game Fizzbuzz? Now Peter Scott has written a version that you can play against your ZX81

Fizzbuzz is a simple game which tests your mental agility.

All you have to do is to count from 1 to 100, rather rapidly. That sounds easy enough, but each time you come to a number that contains a 5 or is divisible by 5 (such as 25 or 56) you must say fizz instead.

And each number that contains a 7 or is divisible by 7 you replace with buzz.

If a number qualifies for both (such as 35 or 57), then you say fizzbuzz.

The program, which is written in ZX81 BASIC, keeps track of the score, but doesn't give you long to think.

So RUN the program, press NEW LINE to start, and if you want your next go to be a number, press 1. If you want fizz, press 2, buzz 3, and fizzbuzz 4.

If all is well, the program prints your answer, and goes on. If not, you get two asterisks, the right answer, and straight on to the next go.

If you get really good, you can shorten the response time in line 170. Or if you get in a complete tangle, you can allow yourself longer.

When you are getting on top of 5 and 7 you can change them, try replacing 5 with 3 in lines 20, 410 and 440.

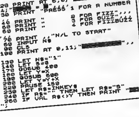
Main variables

N$ stores the current number
S the score
A$ the answer suggested by the player
N dummy, used in calculating whether a number is divisible by, or contains, 5 or 7
Z dummy
X, Y record whether a number is divisible by or contains 5 or 7

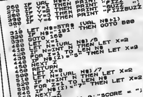
How it works

10-100 give instructions, and print the title
110-120 initialise the variables N$, S
130-160 calculate whether the number is divisible by, or contains, 5 or 7 by calling subroutines 400 and 500. The result is stored in Y: 1 for neither, 2 for 5, 3 for 7, and 4 for both
170-200 reads the player's input, and decides whether it is correct: it prints two asterisks if not
210-250 keeps the score, and prints the correct answer
260-280 increases N$ by one, checks for the end of the game, and recycles back to 130
400-460 is a subroutine which checks whether N$ is divisible by, or contains, 5
500-560 does the same for 7
600 prints the score out of 100

0 4 3 4 7 9 5 0 2 5 3 6 0 2 9 2 6 2 1 7 3 8 4 5 8 2 5 9 2 4 4 5 8 8 6 5 2 4 3 5 6 1

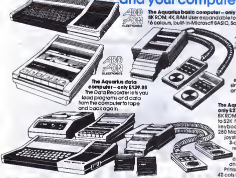


```
10 PRINT AT 3,11;"[illegible]",,
20 PRINT AT 6,0;"[illegible] = [illegible]";TAB
24;"[illegible] = [illegible]",,,
30 PRINT "PRESS 1 FOR A NUMBER
",,
40 PRINT "         2 FOR FIZZ",,,
50 PRINT "         3 FOR BUZZ",,,
60 PRINT "         4 FOR FIZZBUZZ
",,
70 PRINT ,,"N/L TO START"
80 INPUT N$
90 CLS
100 PRINT AT 0,11;"[illegible]",,
,
130 LET N$="1"
140 LET S=0
170 GOSUB 400
180 LET Y=X
190 GOSUB 500
200 LET Y=Y+X
220 PAUSE 150
230 LET A$=INKEY$
240 IF A$="" THEN LET A$="5"
250 IF VAL A$<>Y THEN PRINT "[illegible]
";
```



```
260 IF VAL A$=Y THEN LET S=S+1
270 IF Y=1 THEN PRINT N$;"  ";
280 IF Y=2 THEN PRINT "FIZZ  ";
290 IF Y=3 THEN PRINT "BUZZ  ";
300 IF Y=4 THEN PRINT "FIZZBUZZ
";
310 LET N$=STR$ (VAL N$+1)
320 IF N$="101" THEN GOTO 600
330 GOTO 160
400 LET X=1
410 LET N=(VAL N$)/5
420 IF N=INT N THEN LET X=2
430 FOR Z=1 TO LEN N$
440 IF N$(Z)="5" THEN LET X=2
450 NEXT Z
460 RETURN
500 LET X=0
510 LET N=(VAL N$)/7
520 IF N=INT N THEN LET X=2
530 FOR Z=1 TO LEN N$
540 IF N$(Z)="7" THEN LET X=2
550 NEXT Z
560 RETURN
600 PRINT AT 21,0;"SCORE = ";S;
"/100"
```

This is the dawning of the age of Aquarius – and your computer christmas.



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Escape the Apeman — and outshoot the outlaws

Here are two games that will fit into any Spectrum. They are both written by C. C. Stock, who explains how to play

Apeman

Shipwrecked on the wrong side of Apeman's island, the 15 survivors must cross the island to the safety of the village

But Apeman is enraged by their presence on his land and is after them

You must guide the survivors across the island three at a time, across the marshlands, through the bush and across the river

You are faster than the Apeman in the open, but slower through the bush and across the marshland. The river will wash you down stream and maybe out to sea. Beware of the snakes

How it works

5-150 graphics introduction
220-260 variables
301 520 alters man under control
600-690 moves man, also delays him where necessary
700-760 moves Apeman
805-890 checks if Apeman has caught anyone
1130-1350 kills man
1501-1580 finish
2000-2201 draws island

Variables

a(p),b(p) position of men
a,b position of man under control
c,d old position of man
p number of man under control
z slows man
y pause after man leaves river
r,ra,rb number of dead
s,t position of Apeman
v,u old position of Apeman
ta slows apeman in river
a$ scream
Note: Village is inverse λ. Snake is S

To make the game easier or harder alter line 701

Outlaws

So you think you're fast with a gun. But are you fast enough? Red Jake and his gang of five outlaws are out to get you

You enter the town from the west, slowly stalking along the streets. You see your first man to your right. He turns. You turn. The first shots are fired

There are five controls: 5 turns left, 6 turns round, 7 moves forward, 8 turns right, 0 shoots.

As you wander round the streets, you will only see the outlaws in the same street as yourself. The outlaws are randomly repositioned to make it harder

How it works

130-140 turn the lawman left or right and line 160 draws the right man
200-298 check to see if any outlaws are in view and then print them
300-380 turn the outlaws to face you if necessary and then shoot

Variables

k no of dead outlaws
y,x position of lawman
a,b direction of lawman
a$ contains man
a(n),b(n) position of outlaws
C(n),d(n) direction of outlaws
e(n) delays outlaws one move
s no of shots left

Listing 1 — Apeman

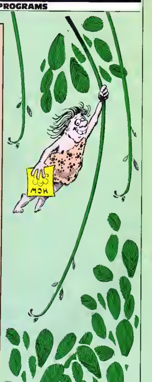
```
   5 REM APE MAN  c.stock 1983
  10 REM Graphics. A=A B=B C=C D
=D
  30 FOR n=0 TO 31  READ a  POKE
 USR  A +n,a  NEXT n
  45 DATA 24,24,255,255,189,189,
36,102
  50 DATA 24,24,60,90,153,24,36,
66
  55 DATA 0,6,6,12,24,28,28,118
  60 DATA 64,24,126,126,24,24,24
,24
 110 BORDER 6  PAPER 4  CLS   PA
PER 6
 120 PRINT AT 5,6, INVERSE 1," A
 P E   M A N A"
 130 PRINT AT 6,0," B You must g
uide 18 shipwrecked people acros
s APE MANS island  to the villa
ge ■, 3 at a time.   Watch out
for AREMAN and do  not tread on
 the Snakes CB SDD"

 140 PRINT AT 16,0," USE Cursers
 ■,■&■ to select man",AT 18,0,"
USE Cursers ■,■ ■&■ to move man
 160 PRINT AT 20,9, PAPER 4,"Pre
ss any key"
 170 PAUSE 0
 180 PAPER 7  CLS  PAPER 6
 190 PRINT AT 21,31, INK 2,"■"
 201 GO TO 2001
 220 DIM a(3)  DIM b(3)
 230 LET y=0  LET za=1  LET z=1
 LET ra=0  LET rb=0  LET v=30  L
ET u=4  LET t=30  LET s=4
 240 LET a$="AAAAAAAAAAAAAARRGHH
H"
 250 LET r=0  LET p=1  LET a=4
LET a(2)=6  LET a(3)=8  LET b=0
 LET b(2)=0  LET b(3)=0
 270 PRINT AT a,b,"B",AT a(2),b(
2),"C",AT a(3),b(3),"C"
 290 GO TO 500
 301 PRINT AT a,b,"C"

 310 LET a=a(p)  LET b=b(p)
 360 PRINT AT a,b,"B"
 501 IF INKEY$="1" THEN IF a(1)<
>22 THEN LET p=1  GO TO 301
 510 IF INKEY$="2" THEN IF a(2)<
>22 THEN LET p=2  GO TO 301
 520 IF INKEY$="3" THEN IF a(3)<
>22 THEN LET p=3  GO TO 301
 530 LET c=a  LET d=b
 601 IF y>0 AND z=0 THEN LET y=y
-1  GO TO 650
 603 IF ATTR (a,b)=32 OR ATTR (a
,b)=40 THEN LET z=z+1  IF z<2 TH
EN GO TO 650
 605 IF ATTR (a,b)=40 THEN LET z
=z+1  IF z<6 THEN LET a=a-1  LET
 y=3  GO TO 660
 610 LET z=0
 615 IF INKEY$="5" THEN LET b=b-
1
 620 IF INKEY$="6" THEN LET a=a+
1

 630 IF INKEY$="7" THEN LET a=a-
1
 640 IF INKEY$="8" THEN LET b=b+
1
 645 IF a<0 OR a>21 OR b<0 OR b>
31 THEN LET a=c  LET b=d
 650 LET a(p)=a  LET b(p)=b
 652 IF SCREEN$ (a,b)="S" THEN P
RINT AT c,d,"  GO TO 1000
 655 IF a<0 THEN PRINT AT c,d,"
"  LET a=22  GO TO 1200
 660 PRINT AT c,d, OVER 1, B",AT
 a,b,"B"
 690 IF a=21 AND b=31 THEN GO TO
 1205
 701 IF RND<.2 THEN GO TO 600
 703 BEEP .02,0  IF ATTR (s,t)=4
0 THEN LET za=za+1  IF za<3 THEN
 GO TO 600
 704 LET za=0
 705 GO TO 730

 710 LET s=s-1+2*(a>s)  GO TO 76
0
 735 IF t=b THEN GO TO 710
 740 IF s=a THEN GO TO 750
 745 IF RND<.5 THEN GO TO 710
 750 LET t=t-1+2*(b>t)
 806 PRINT AT u,v,"  ",AT s,t,"A"
 810 LET u=s  LET v=t
 815 IF a=s AND b=t THEN GO TO 1
201
 820 IF a(1)=s AND b(1)=t THEN L
ET a(1)=22  GO TO 1130
```

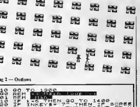


```
 825 IF a(2)=s AND b(2)=t THEN L
ET a(2)=22  GO TO 1130
 830 IF a(3)=s AND b(3)=t THEN L
ET a(3)=22  GO TO 1130
 890 GO TO 601
1130 GO SUB 1301
1140 LET r=r+1  IF r=3 THEN GO T
O 2401
1150 GO TO 601
1201 GO SUB 1301

1210 LET a(p)=22
1235 PRINT AT 21,31, INK 2,
1240 IF a(1)<>22 THEN LET p=1
1250 IF a(2)<>22 THEN LET p=2
1250 IF a(3)<>22 THEN LET p=3
1270 LET r=r+1  IF r=3 THEN GO T
O 2401
1280 GO TO 310
1301 FOR n=1 TO 20
1310 PRINT AT 21,E+n, OVER 1,a$
n)
1315 BEEP .05 27
1320 NEXT n
1330 PRINT AT 21,6, OVER 1,a$
1340 LET rb=rb+1
1350 RETURN
1401 LET ra=ra+1  IF ra=5 THEN G
O TO 1501
1420 GO TO 250
1501 PAPER 6  PRINT AT 9,2, INVE
RSE 1,  ALL HAVE TRIED TO CROSS
CB  ,AT 12,2,  A 'yrt,' FAILED

1505 IF rb=0 THEN GO TO 1560
1510 FOR n=1 TO rt
1520 PRINT AT 12,14+n,"D"  BEEP
.5,0  NEXT n
1550 PRINT AT 15,2, Do you want
another GO (Y/N)
1560 IF INKEY$="y" THEN GO TO 16
0
1570 IF INKEY$="n" THEN BEEP 1,
2  STOP
1580 GO TO 1550
2010 FOR n=22528 TO 23230  POKE
n,32+24*(RND<.6)  NEXT n
2060 FOR n=1 TO 4  LET a=RND*17
 LET b=RND*19+3
2070 FOR m=1 TO 4  PRINT AT a+m,
b, PAPER 6,          NEXT m  NE
XT n
2101 LET a=RND*20+6
2110 FOR n=0 TO 21  PRINT AT n,a
  PAPER 6,      NEXT n


2150 FOR n=1 TO 20  PRINT AT RND
*21,RND*29+1,"S"  NEXT n
2201 GO TO 210
```



A screen dump from Outlaws shows how the game looks during play

Listing 2 — Outlaws

```
  10 GO TO 1900
  90 REM ** Main loop **
 101 REM Man
 110 IF k=6 THEN GO TO 1400
 120 IF INKEY$="7" THEN IF SCREE
$ (y+a,x+b)=" " THEN PRINT AT y
x, "  " AT y+2,x," "  LET x=x+b
ET y=y+a
 130 IF INKEY$="6" THEN LET a=-a
  LET b=-b
 140 IF INKEY$="8" THEN LET c=a
LET a=-b  LET b=c
 100 IF INKEY$="8" THEN LET c=b
LET b=-a  LET a=c
 106 IF x<0 OR x>31 OR y<0 OR y>
2 THEN LET x=x-b  LET y=y-a
 100 PRINT AT y x, INK 3,a$(a+3,
+3),AT y+1 x,a$(a+3,b+4)
 170 IF INKEY$="0" THEN GO TO 40

 221 REM Outlaws
 208 GO TC 200

 210 FOR n=1 TO 5
 220 IF a(n)=y THEN IF INT ((y+2
1/4)=(y+2)/4 THEN PRINT AT a(n),
b(n), INK 2,a$(c(n)+3,d(n)+2),AT
 a(n)+1 b(n),a$(c(n)+3,d(n)+4)
GO TO 300
 230 IF b(n)=x THEN IF INT (x/4)
=x/4 THEN PRINT AT a(n),b(n), IN
K 2,a$(c(n)+3,d(n)+3),AT a(n)+1,
b(n) a$(c(n)+3,d(n)+4)  GO TO 34
0
 240 LET e(n)=0  PRINT AT a(n),b
(n),"  ",AT a(n)+1,b(n),"  "
 250 NEXT n
 260 FOR n=1 TO 10  NEXT n
 290 GO TO 100
 301 REM  Gunfight
 305 IF d(n)+(x-b(n))<>0 THEN IF
ABS (x-b(n))<14 THEN LET e(n)=e(
n)+1  IF e(n)=2 THEN GO TO 1450
 310 LET c(n)=0



 320 LET d(n)=2  IF x<b(n) THEN
LET d(n)=-2
 330 GO TO 250
 340 IF c(n)+(y-a(n))<>0 THEN IF
ABS (y-a(n))<14 THEN LET e(n)=e(
n)+1  IF e(n)=2 THEN GO TO 1450
 360 LET d(n)=0
 370 LET c(n)=2  IF y<a(n) THEN
LET c(n)=-2
 390 GO TO 250
 401 REM  Gun
 404 IF s=0 THEN GO TO 200
 405 BEEP .02,12  BEEP .1,24  LE
T s=s-1
 408 FOR n=1 TO 5
 410 IF SCREEN$ (y+a*n ,x+b*n)<>" "
  THEN GO TO 450
 420 NEXT n
 450 FOR m=1 TO 6



 460 IF a(m)=y+a*n THEN IF b(m)=
x+b*n THEN PRINT AT a(m),b(m),"  "
  AT a(m)+1,b(m), INK 2,"IJ"  LE
T a(m)=0  LET b(m)=1  LET k=k+1
 GO TO 100
 470 NEXT m  GO TO 100
 501 REM  Move OUTLAWS
 510 LET l=INT (RND*6+1)
 520 IF b(l)=1 THEN GO TO 210
 525 PRINT AT a(l),b(l),"  ",AT a
(l)+1,b(l),"  "
 530 LET a(l)=INT (RND*11)*2  LE
T b(l)=INT (RND*15)*2+2  IF SCRE
EN$ (a(l),b(l))<>" " OR a(l)=y O
R b(l)=x THEN LET b(l)=b(l)-2  G
O TO 530
 540 GO TO 510
 999 REM  ** Variables etc **
1001 CLS



1005 FOR n=0 TO 20 STEP 4  PRINT
 AT n,0;"  LL  LL  LL  LL  LL  L
L  LL  LL  KL  KL  KL  KL  KL  K
L  KL  KL"  NEXT n
1010 LET a=2  LET b=0
1101 DIM a$(6,6)
1110 LET a$(1)="  EF  "  LET a$(3)
="CD  GH"  LET a$(5)="  AB  "
1120 DIM a(6)  DIM b(6)  DIM c(6
)  DIM d(6)  DIM e(6)
1130 FOR n=1 TO 6  LET a(n)=INT
(RND*11)*2  LET b(n)=INT (RND*14
)*2+4  IF SCREEN$ (a(n),b(n))<>" "
  THEN GO TO 1150
1140 LET b(n)=b(n)-2
1150 LET c=a  LET a=-b  LET b=c
 LET c(n)=a  LET d(n)=b  NEXT n
1160 LET s=12  LET k=0  LET a=0
 LET b=2  LET y=12  LET x=0
1170 GO TO 100
1401 REM  FINISH



1410 PRINT AT 10,9, FLASH 1, PAP
ER 3, INK 6," YOU HAVE WON ",AT
11,7," AGAINST ALL ODDS "
1420 FOR n=1 TO 40  BEEP .05,RND
*20+n  PAUSE 2  NEXT n  GO TO 14
50
1450 FOR n=1 TO 3  BEEP .02,12
BEEP .1,24  NEXT n  PRINT AT y,x
,"  ",AT y+1,x, INK 3,"IJ"
1455 PRINT AT 7,11, FLASH 1, PAP
ER 2, INK 6," YOU LOST ",AT 8,5,
" AGAINST HOPLESS ODDS "
1460 PRINT AT 11,5, PAPER 4,"YOU
 KILLED ";k;" OUTLAWS"
1465 IF s=0 THEN PRINT AT 14,5,
PAPER 6,"But run out of bullets"
1470 FOR n=1 TO 5  BEEP 1,RND*10
-20  NEXT n  BEEP 1,-20
1480 PRINT AT 19,5,"Press any ke
y to continue"
1490 IF INKEY$="" THEN GO TO 149
0

1495 GO TO 1000
1901 REM  INTRODUCTION
1910 BORDER 4  PRINT AT 5,8," O
U T L A W S "
1920 PRINT AT 8,0,"  Red Jake and
 his gang have cometo release th
eir man from your  custody. Can
you the Lawman,killall six first
"
1930 PRINT AT 14,5,"Press 7 to m
ove forward"  PRINT TAB 5,"Press
 6 to turn round"  PRINT TAB 5,"
Press 5 to turn left"  PRINT TAB
 5,"Press 8 to turn right"  PRIN
T TAB 5,"Press 0 to shoot"
2001 REM  Graphics  AA BB CC DD
EE FF GG HH IJIJ KK LL
2010 FOR n=0 TO 95  READ q  POKE
 USR "A"+n,q  NEXT n
2020 PAUSE 0  GO TO 1000
```

```
1410 PRINT AT 10,9, FLASH 1, PAP
ER 3, INK 6," YOU HAVE WON ",AT
11,7," AGAINST ALL ODDS "
1420 FOR n=1 TO 40  BEEP .05,RND
*20+n  PAUSE 2  NEXT n  GO TO 14
60
1450 FOR n=1 TO 3  BEEP .02,12
BEEP .1,24  NEXT n  PRINT AT y,x
,"  ",AT y+1,x, INK 3,"IJ"
1455 PRINT AT 7,11, FLASH 1, PAP
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 5,"Press 8 to turn right"  PRIN
T TAB 5,"Press 0 to shoot"
2001 REM  Graphics  AA BB CC DD
EE FF GG HH IJIJ KK LL
2010 FOR n=0 TO 95  READ q  POKE
 USR "A"+n,q  NEXT n
2020 PAUSE 0  GO TO 1000
```

```
2101 DATA 56,254,56,56,124,124,1
24,255,255,56,40,108,108,108,108
,108
2110 DATA 28,127,29,12,28,30,20
124,254,29,12,28,20,54,30,34
2120 DATA 28,127,25,28,127,93,93
,93,127,29,20,54,54,54,54,54
2130 DATA 56,254,56,48,56,120,12
0,127,52,56,48,56,40,108,100,68
2140 DATA 0,0,28,63,231,255,0,0,
0,0,222,228,254,126,0,0
2150 DATA 255,0,255,137,137,249,
249,249,255,0,255,195,195,255,25
5,255
3001 FOR n=1 TO 6  PRINT a(n),
 b(n),"  ",c(n),"  ",d(n),"  ",e(n
)  NEXT n
```

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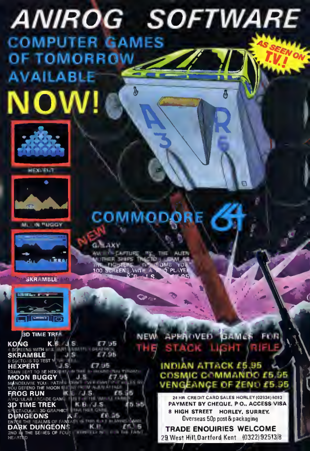

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TIS manifests itself in a number of ways one of the most [illegible] symptoms being a victim's complete inability to feel at ease in the world of reality. Other symptoms include insomnia, a desperate need to play a Mysterious Adventure, and an overwhelming sense of acute enjoyment.

Experts believe that TIS is usually contracted as a result of prolonged exposure to Mysterious Adventures, this is commonly caused by owning any of the following Home Computers:

48K SPECTRUM, BBC MODEL A OR B, TRS80, COLOUR GENIE, ATARI 400/800, COMMODORE 64, DRAGON 32, 16K ZX81, LYNX etc.

When questioned about this epidemic, a representative of DIGITAL FANTASIA, a company who are actively involved in research and development work on Mysterious Adventures said, "There is probably no cure for TIS other than mains failure, faulty RAM chips etc. which can offer at best only a Temporary solution". "In the absence of a more permanent cure, I would advise TIS sufferers to submit to the Syndrome and obtain Mysterious Adventures from any sources available to them". "TIS is highly contagious and in view of the current Worldwide Epidemic, I would say enjoy it while you can, resistance is futile".

If you own a BBC Computer, Commodore 64, 48K Spectrum, Atari 400/800, or Dragon 32 you can obtain Mysterious Adventures in any of the following doses:

1) THE GOLDEN BATON
2) THE TIME MACHINE
3) ARROW OF DEATH (PART 1)
4) ARROW OF DEATH (PART 2)
5) ESCAPE FROM PULSAR 7
6) CIRCUS
7) FEASIBILITY EXPERIMENT
8) THE WIZARD AKYRZ
9) PERSEUS AND ANDROMEDA
10) TEN LITTLE INDIANS

[illegible] V.A.T. and Postage. [illegible] Discounts are available for Pushers.

[illegible] HEALTH WARNINGS. MYSTERIOUS ADVENTURES CAN SERIOUSLY DAMAGE YOUR SENSE OF REALITY.

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For Atari, Commodore 64, Dragon 32 order from

CHANNEL 8 SOFTWARE
51 FISHERGATE, PRESTON
LANCASHIRE, ENGLAND TEL. (0772) 53057

Mysterious Adventures

WHAT ARE MYSTERIOUS ADVENTURES?

MYSTERIOUS (Adjective) – "Baffling full of mystery strange or unaccountable"

ADVENTURE. (Noun) – "An enterprise full of risk or danger an experience of unforeseen events endangering the participants life a gamble on failure or success"

To start play on a MYSTERIOUS ADVENTURE is to take a step out of the world of reality and into the world of dreams Your computer is your guide on these fantastic journeys in time and space where danger is ever present and solutions to problems seldom come easy

By typing in simple commands in plain English you can "talk" to your computerised guide and tell it what your next actions are to be

MYSTERIOUS ADVENTURES bring a frightening reality to the surreal situations in which you will find yourself You will become involved in these strange worlds of the imagination you will feel anger when things seem to be moving against you you will feel elated when you overcome obstacles that are set in your way Eventually you will feel overjoyed as you reach the climax of your mission and success is yours.

Any MYSTERIOUS ADVENTURE is not a mission to be taken lightly success will never be instant – just as Rome was not built in a day so each Adventure can rarely be completed in one session To this end a "SAVE GAME" feature has been incorporated in each of the Adventures This means that at any given time during play of an Adventure you can store on tape your precise whereabouts, your equipment carried and any other pertinent details about your present status

NEW DEVELOPMENTS ON MYSTERIOUS ADVENTURES

Over the past few years Adventure programs on Computers have almost always been presented in the classic "Text only" mode For most Adventure players this has indeed been the way they prefer to play Adventures The mental imagery generated by such an approach is limited only by the player's own imagination One of the main reasons for the "Text only" approach has been the lack of hardware capabilities with regard to Graphics resolution – Pictorial Adventures could at best be only very limited in scope

This situation is changing now however and Brian Howarth author of the MYSTERIOUS ADVENTURES series has spent many hours incorporating Graphics into the Adventures By working in close conjunction with Jon Blacow a professional Artist Brian has produced a series of extremely vivid and imaginative Adventures Each MYSTERIOUS ADVENTURE now features in addition to the Text description pictorial "views" of your current location and surroundings As you enter each new location a high resolution colour picture is rapidly drawn The effect of this is to bring much more reality to the Scenario you can actually see the situation you are faced with and act accordingly It must be stressed that each picture has been designed so that it will enhance rather than conflict with your mental Imagery At the single stroke of a key you can erase the picture and carry on with your Adventure in text only if this is your preference We are confident that no other Adventure programs can boast such breathtaking realism and imagination combined with the flexibility and ease of play that have made MYSTERIOUS ADVENTURES such a phenomenal worldwide success

In addition the Adventures now features full sentence decoding as standard These mean that you are no longer restricted to inputting single or two-word commands You can now type in whole sentences in more or less plain English Your computer will quickly analyse the sentence and perform a whole string of your commands Just another feature designed to maximise your enjoyment of these world beating games!

The "New style" MYSTERIOUS ADVENTURES are currently available for the 48K SPECTRUM COMMODORE 64 More releases are planned this year which will include DRAGON 32 ORIC 1 APPLE II & IIe ATARI LYNX MATTEL AQUARIUS IBM PC etc
Please write or phone for availability

ZX81 AND SPECTRUM PROGRAM

Mind the doors as you try to bag the gold

Treasure can be yours unless you're trapped by the doors. Ray Elder's game is for both the ZX81 and Spectrum. He includes tips to enhance the program for the Spectrum

This game was written on the ZX81, but with the Spectrum in mind. The program will run on both computers as it stands, but with a little thought many improvements can be made for the Spectrum — colour, sound, UDG for character (0 in the listing) etc

The idea is simple, move from the bottom of the screen up through the grid to collect the treasure at the top (perhaps a UDG on the Spectrum?)

Meanwhile your presence on the floor may trigger the doors which close in on you. Speed and planning are necessary to achieve the highest score. I tried to create a simple but interesting game — I hope you enjoy it.

Keys are Z/X for left and right and K/M for up and down.

Hints on conversion

I specifically wrote this game using standard characters in order to enable conversion. A few other points to note

DIM F$ (6,32) most BASICs accept and require only DIM F$(6) the 32 is the length of each element and is the length of the Sinclair screen. You will need LET F$(6) = "32 spaces" added to your program

INT (RND*20 + 6) produces a random number between 6 and 25

Line 90 Most BASICs need LET MID$ (F$(I),INT (RND*20 + 6),1)

**INKEY$** lines 400/410 probably need to replace by a previous line G$ = INKEY$ and as Sinclairs return 1 for true and 0 for false, you may have to change the signs if your machine returns −1 for true. Also statements "IF L" may have to be written in full (if L (greater than, less than) 0 etc.) Note A$ needs to have as many characters as F$(6) — 32 in listing — pad out with extra spaces

L. 425 replace A$ (X1 + 1) with MID$(A$,X1 + 1,1)

L.440 replace F$ statements by MID$(F$(INT((Y1 + 1)/3)), X1 + 1,1) Print at Y,X. Positions print at row Y column X

Variables

A(17) holds present position of the "door" on each line

F$(6,32) 1 5 are the grid lines 6 is 32 spaces to wipe a line

HS high score

```
   1 REM ****************
   2 REM *    SALVAGE    *
   3 REM ****************
   5 GO SUB 3000
   7 REM ****************
   8 REM * INITIALISE   *
   9 REM ****************
  10 DIM A(17)
  20 DIM F$(6,32)
  30 LET HS=0
  40 LET C=31
  50 LET B=0
  60 LET S=0
  70 FOR I=1 TO 5
  80 LET F$(I)="******************
**************"
  90 LET F$(I,INT (RND*20+6))=" "
 100 NEXT I
 110 LET Y=17
 115 LET T=0
 120 LET X=1
 130 LET A$="          £ £ £ £ £ £
£ £ £ £   "
 140 LET A(1)=-1
 150 FOR I=2 TO 14 STEP 3
 160 LET A(I)=-1
 170 LET A(I+1)=B
 180 LET A(I+2)=C
 190 NEXT I
 200 LET A(17)=-1
 210 LET Z=0
 287 REM **********
 288 REM * SCREEN *
 289 REM **********
 290 CLS
 300 PRINT "SCORE= ',S,"HI-SCORE
= ",HS,A$
 310 FOR I=1 TO 5
 320 PRINT F$(I)
 330 PRINT TAB B,">",TAB C,"*",T
AB B,"*",TAB C,"<"
 340 NEXT I
 350 PRINT AT Y,X,"O"
 397 REM ****************
 398 REM * PLAYER MOVE  *
 399 REM ****************
```

How it works

5 GOSUB for instructions

10-60 set initial values of variables

70-100 for each array 1-5 of F$ set it to 32 "stars", then replace one, at random, with a space

110-130 more variables

140-200 set each element of A to 1 if F$ row, or 0 or 31 for "door" position

210 zero flag

290 clear screen (Spectrum set BORDER/PAPER/INK colours?)

300-350 draw screen

400-410 see if key is being pressed and, if so, store next position in Y1 or X1

420 if you have returned with some goodies GOTO 1000

425 if you have reached the goods, GOSUB 1500

430 if you are on line one GOTO 460

435 L = 1 if an F$ line, 0 if other position

440 if not at a space on F$ line, GOTO 600

445 if all OK GOTO 460

450 L = flag for position

455 check to prevent movement into a "prods" tail

460 if no move has been made jump to 600 — this prevents flickering

470 wipe old character, print in new position

480-490 update X and Y to new position

600 if on F$ line GOTO start of main loop. Also 1 in 5 chance of moving door (change 8 to give more or less frequent movements)

610-630 move appropriate door' one place to left or right

640 if character hit GOTO 2000

650 update new position to A(Y)

660 GOTO main loop

1000 if complete set of items salvaged GOTO 1080

1010 move character, print message

1020-1040 update score, zero flag 3

1050-1070 GOSUB pause, wipe, then continue

1080-1140 give a bonus for clearing sheet, reset variables GOTO draw new sheet

1200-1230 pause wipe line 18, return

```
 455 IF (A(YI)>=XI AND L) OR (A(
YI)<=XI AND NOT L) THEN GO TO 80
0
 460 IF X=XI AND Y=YI THEN GO TO
 800
 470 PAINT AT Y,X," ",AT YI,XI,"
O"
 480 LET X=XI
 490 LET Y=YI
 597 REM **************
 598 REM * PROD MOVE *
 599 AEM **************
 600 IF A(Y)=-1 OR RND<.8 THEN G
O TO 400
 610 LET E=(Y/3=INT (Y/3))
 620 LET D=A(Y)+E-(E=0)
 630 PRINT AT Y,A(Y)," ",AT Y,D;
("<" AND NOT E)+(">" AND E)
 640 IF D=XI OR D=X THEN GO TO 20
00
 650 LET A(Y)=D
 660 GO TO 400
 997 REM ***********
 998 REM * SUCCESS *
 999 REM ***********
1000 IF A$=F$(6) THEN GO TO 1080
1010 PRINT AT Y,X," ",AT YI,XI,"
O",AT 18.0,"WELL DONE   SCORE ="
;
1020 LET S=S+100
1030 PRINT S,AT 0,6,S
1040 LET Z=0
1050 GO SUB 1200
1070 GO TO 400
1080 PRINT AT 18,0,"BONUS +1000"
1090 LET S=3+1100
1100 PRINT AT 0,6,S
1110 GO SUB 1200
1120 LET 8=1
1130 LET C=30
1140 GO TO 110
1200 FOR I=1 TO 50
1210 NEXT I
1220 PRINT AT 18,0,F$(6)
1230 RETURN
1497 AEM **************
1498 REH * £ ROUTINE *
1499 REM **************
1500 IF Z=1 THEN LET XI=X
1510 IF Z=1 THEN AETURN
1520 LET A$(XI+1)=" "
1530 LET Z=1
1550 RETURN
1997 REM ***********
1998 REM * CRUSHED *
1999 AEM ***********
2000 FOR I=1 TO 20
2010 PRINT AT Y,X,"*",AT Y,Y,"O"
 AT Y,X,"X"
2020 NEXT I
2030 PAINT AT 18,0,"SQUASHED...
PRESS A KEY TO PLAY"
2040 IF S<=MS THEN GO TO 2070
2050 PRINT "A NEW HI-SCORE  ",S
2060 LET MS=S
2070 IF INKEY$="" THEN GO TO 204
0
2080 GO TO 40
3000>CLS
3010 PRINT TAB 12,"RESCUE."
3020 PRINT AT 3,8,"MOVE YOUR MAN
- O -UP THE SCREEN TO RESCUE THE
 BAGS OF GOLD."
3040 PRINT AT 8,0,"KEYS   Z TO M
OVE LEFT",TAB 7,"X TO MOVE RIGHT
",TAB 7,"K TO MOVE UP",TAB 7,"H
TO MOVE DOWN"
3050 PRINT AT 18,0,"BEWARE OF TH
E MOVING PRODS WHICMARE SLOWLY C
LOSING IN ON YOU."
3060 PRINT AT 21,4,"PRESS ANY KE
Y TO PLAY"
3070 IF INKEY$="" THEN GO TO 307
0
3080 RETURN
```

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JANUARY 6th 7th 8th

January 6th 7th 8th are the days when you can play all day with the very latest in software on the very best computers, including Atari, Vic 20 and 64, ZX Plus Spectrum, [illegible] Dragon and BBC [illegible]. All will be on display at The London Home Computer Show. Once again the exhibits will be in the lower and [illegible] with [illegible] from £5 [illegible] £300.

Play all day, try or buy it's all there at the greatest home computer show on earth!

Friday 6th January 1984
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THE LONDON
HOME COMPUTER SHOW
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Sport with thought

Our review panel tries out a selection of thinking and strategy games to play on your micro

Memory Game
Oric £3.95

Stour Computing, 16 Old Bridge Road, Bournemouth

A version of the familiar Pairs or Pelmanism game, usually played with a pack of cards.

Twelve symbols are secretly plotted over a grid on the screen and the players, up to four of whom can take part, take turns in selecting positions.

The symbols at the chosen pair of positions are briefly revealed and re-hidden if they do not match.

Since there are 48 positions the maximum number of pairs is 24, and a point is awarded for successful choice.

The 48K version has an attractive jingle not available on the 16K and, slightly more important, it also has instructions. However 16K owners who couldn't figure out how to play the game probably wouldn't get as far as loading the program in the first place.

Having said that, I had some difficulty in loading the 48K version, but once that had been mastered, I found the program was clearly presented and attractively laid out.

Nine of the 12 symbols are redefined characters — why were the other three left unattended to?

Simple, but fun, this game would appeal to the younger members of the family. **P.S.W.**

instructions	75%
playability	85%
graphics	65%
value for money	70%

★ ★ ★ ★

Puzzler
Dragon 32
£6.95

Shards Software, 189 Eton Road, Ilford, Essex IG1 2UQ

This game is like a cross between the sliding block puzzles we used to keep in our pockets and jigsaws with straight edged pieces!

The aim is to reconstruct a picture from the jumbled pieces. There are three programs in the pack and four pictures in each program, so there is a good gradual difficulty gradient. Each puzzle can also be played in set numbers of moves and against the clock.

If you decide to play against the clock, then a slow move means that a random exchange is made. This can undo some of your previous good work and makes the program that much more interesting.

Beyond that there is very little to say. It works well enough and the pictures are acceptable but not thrilling.

If mental geometry is your thing, then it might be for you — otherwise, buy a jigsaw. **D.C.**

instructions	60%
ease of use	70%
graphics	70%
value for money	50%

★ ★ ★

White Knight
Mk.II
32K BBC £11.50

BBC Software, 35 Marylebone High Street, London W1M 4AA

Is another chess program really necessary? The answer for White Knight is an unequivocal yes — I think it will soon become the program by which all others are judged.

No less than 16 different options are available to allow you to select speed and playing features. Tournament rules can be set up, as can clock time, orientation (black or white) and difficulty (i.e. how long the computer will 'think').

Speed of thought can actually be set from between 1 second and several hours.

If all these options are not enough, White Knight also displays details of its thought processes, giving insight into strategy.

In my opinion, the program played an interesting and challenging game — so challenging that I decided to let it play against Sargon II running on my Apple II.

Most impressively, White Knight beat level 1 Sargon, playing white, after 60 moves. Perhaps I'll let it play itself with invisible pieces (more options!) **P.D.**

instructions	90%
ease of use	90%
playability	95%
value for money	80%

★ ★ ★ ★ ★

Gangsters!
48K Spectrum
£6

Cases Computer Simulations, 14 Langton Way, London SE3 7TL

I have seen quite a few version of Kingdoms in my time, but Gangsters has to be my favourite. The first time I played it only took me 11 months to take over the underworld. Great.

The idea of the game is that you are the leader of a new gang in town and with the capital you are given at the start of the game you must take over and eventually become master of the underworld.

You can buy such appealing things as speakeasies, brothels and distilleries. With these establishments you make your income. This can then be either used to buy more speakeasies etc. or used as bribes and payments for contracts.

The game uses excellent sound and graphics throughout, especially for a game which is not normally associated with all the whizzes and bangs you would find in an arcade game.

For example, it starts with the screen being shot with bullet holes, accompanied by some pretty effective, and obviously machine code, sound.

The game itself is written in BASIC, but it runs perfectly well. I have only found one bug so far — if you enter the amount of gangsters you want to hire as zero (which it accepts), then the game gets caught in endless loops. **P.S.**

instructions	85%
playability	100%
graphics	90%
value for money	99%

★ ★ ★ ★ ★

It's Only
Rock 'n Roll
48K Spectrum
£6.95

K'Tel, 620 Western Avenue, London W3

Already a big name in selling records and gadgets, K-Tel is now jumping on to the software bandwagon.

But this is a bad start — and anyone joining a sophisticated market needs to make a strong opening bid.

The challenge to become a star lost attraction after one or two plays. For a program based on pop music a machine with synthesiser ability is needed, say BBC or Commodore.

The Spectrum cannot do much to provide sound in the concert highlights graphics sequence, which is a waste of time and memory.

You must take decisions regarding song writing, management, concert tours, energy and cash expenditure.

You are swung between the options list, the consequences of your decision and odd news flashes, which often appear to be of no consequence to your situation.

Can you make a million and collect three status symbols?

One of the least amusing features is the attempted humour in the random composition of song lyrics — lavatory style laughs.

If you are intent on making a million then don't invest your first £7 in this. **P.C.**

instructions	50%
playability	20%
graphics	10%
value for money	10%

★

All that's new at the Microfair

Once again, we bring you the first full report of the latest ZX Microfair. Paul Liptrot went there

Denis Thatcher dreams of some of the characters in the new adventure Denis Through the Drinking Glass

Chris Monckton, proprietor of Chipmunk, claims you'll clean up at the casino with his Blackjack program

A new computer trolley from Young and Jones keeps all your computing gear tidy

Anne Galloway, 23, with the latest game from Lydenhurst, De-Fusion

Leslie Hartridge, "whizz-dad" and author of Flippit, with daughters Mary Ann and Carol-Lynn

IT WAS a more relaxed Microfair this time because organiser Mike Johnston had extended it to two days.

So, although more than 11,000 people attended there was room to move in the aisles — unlike last time when 8,000 attended the one-day event.

It was held at north London's Alexandra Pavilion, which will also be the venue for the next Microfair on February 4.

There was lots of new software and a selection of new add-ons plus more retailers than at earlier shows.

This last fact prompted software house CRL to abandon its booked stand.

Managing director Clement Chambers said there was no point in staying when retailers were selling the same software as the manufacturers and, in some cases, undercutting prices.

But Mr Johnston, who is also secretary of the Guild of Software Houses, said he was not going to dictate who took stands, provided the shows offered the widest possible selection of add-ons and software.

In fact, he said, retailers could extend the range of software on show by displaying products from companies without stands.

"I would have liked him to have stayed since he booked and some people will have been disappointed. And if he can't undercut retailers . . ."

A lovable but dim St Bernard called Brandy was the inspiration for the first arcade game from **Carnell**, the software company best known for its adventures.

The Adventures of St Bernard, priced at £5.95 for the Spectrum, is based on director Stuart Galloway's dog. He said: "Brandy gave me the idea. He's as thick as two short planks."

In the game, programmed by Stephan Kirk, you guide Brandy past wolves, pools with ravenous walruses and skating penguins to rescue his mistress from the lair of the evil snowman.

Carnell also launched The Crypt (£4.95, Spectrum) by co-director Roy Carnell, who wrote most of Carnell's other adventures. Two more which continue the theme are due next month.

Denis Through the Looking Glass, a Spectrum adventure at £5.50, bears the warning: "Not recommended for children under 13."

It is based on our Prime Minister's husband and features figures like Ken Livingstone, Norman Tebbitt, Mary Whitehouse, Tony Benn and the Pope with Dennis Skinner, voluble MP for Bolsover, as the guide.

Applications' Roger Taylor explained: "There are a couple of bawdy bits when he gets to Soho. But you will never solve it if you've got a dirty mind."

PSL showed a new light pen from Trojan designer Geoff Jones. Priced at £17.25 for the Spectrum, it can draw in hi-res with a choice of eight colours and screens can be saved from and loaded to the screen.

The company also had a new Abbex game by 17-year-old Paul Reynolds. Krakatoa (£5.95, Spectrum) is part arcade, part strategy in which you have to stop a tanker being sunk. If you fail you must rescue survivors by helicopter.

Hisoft brought out Microdrive versions of Pascal (£25) and Devpac (£14), an assembler/disassembler. More comprehensive versions are promised next month and Hisoft says existing owners can upgrade at a small cost.

CDS has two new £5.95 games for the Spectrum: Magic Meanies, an arcade game which takes place underground, and Spectrum Safari, in which three men stranded on an island have to barter for food and boat.

The YOJO computer desk trolley was on display by **Young and Jones Designs**. Priced at £44.95 — with £4.95 for optional storage bin — it is supplied packed flat in beige and black painted steel. It holds computer, tape unit, TV, disc drives with power supply and cables kept out of sight.

David Husband's ZX81 FORTH ROM with multi-tasking replaces the ZX81's BASIC ROM and comes as a fit-it-yourself EPROM, with manual, at £25. It needs memory expansion and will work with 16K, 32K or 64K RAMpacks.

Mr Husband says his FORTH is quicker than FIG-FORTH in most applications, being a compiler directive language which does not use the traditional inner-interpretive approach.

ZX81 FORTH matched FIG-FORTH standards, but not all FIG-FORTH words due to lack of memory. It contained some non-standard words for multitasking — up to 10 at a time which can be scheduled to execute from 50 times a second to once a year.

Ready converted ZX81s are available.

Mikro-Gen launched 13 new titles, bring its range up to 25. Among them is Mad Martha II, a sequel to its top-seller featuring a hen-pecked husband. Mikro-Gen's Paul Denial said Pat the Postman, which involves collecting parcels for a mail train, was good for children because "no-one kills anything."

Both cost £6.95.

A partnership of three teenagers, calling themselves **Star-**

zone, showed their first product, an arcade game with the familiar sounding name of Zaxxan (Spectrum, £5.50). But writer Nial Mardon, 15, said: "It's not the same as Zaxxon." The partnership, Tim Mardon (Nial's brother), David Cowell and Tim Lake, plan more software for the Spectrum and the BBC micro.

Add-On Electronics showed two new £5 Spectrum games. Chuckman, a maze game featuring bombs and pits, and a space fighter game called 3D Star Wars.

Master Tool Kit (£9.95) from **OCP**, adds new features to the Spectrum, including auto and re-number, trace, clock and alarm, delete/copy, string search and substitute, 10 user defined keys and a separate character generator.

Nineteen new games were brought out by **dk'Tronics** — 12 for the Spectrum, five for the Commodore 64 and two for the VIC-20.

Quicksilva has Ultisynth 64, which turns the Commodore 64 into a music synthesiser for £14.95 and a version of its popular Mined Out for the Electron (£6.95).

New concepts in Spectrum joysticks, both costing £9.95, were shown by two separate companies — on adjoining stands. Both joysticks clamp onto the keyboard and depress the cursor keys and are produced by **E.F.C.** and **Grant Design**.

Artic had Earth Defence, in which you save a city from nuclear devastation, and the self-explanatory Snooker, both at £5.95 for the Spectrum.

The company also previewed a ladders game called Bear Bovver in which your Teddy bear has to avoid the bovver bears. Due out in a fortnight, it was written by 27 year-old Jon Ritman.

Gilsoft promised four new adventures next month, all written with its program called The Quill, which enables machine code adventures to be written without a knowledge of machine code.

A new joystick interface from **Fox Electronics** (£28.50) contains a CMOS RAM, powered by a trickle-charge battery, which can store the names of 16 games and the keyboard details for up to three months. It can also be used as a pseudo-ROM for regularly-used routines. The plug-in interface accepts Atari-type nine-pin joysticks.

Silversoft showed three new arcade games at £5.95 — Freez' Bees, Robot Riot and Sam Spade.

De-Fusion (£5.50, Spectrum) from **Lydenhurst** involves you in de-fusing a bomb, while avoiding skinheads' boots.

Dressed as Groucho Marx, director Mel Croucher lived up to **Automata**'s image as software's jokesters.

The Piman, Automata's character, is on a calendar, audio tape — and computer programs

Nial Mardon, 15, wrote Zaxxan for teenage partnership Starzone

He was offering a Christmas deal which wasn't software at all. The £5 package consists of a C20 blank tape, a calendar featuring Automata's Piman character plus an audio tape of The Piman's Greatest Hits.

Recorded by Mel Croucher, the tracks include Computer Alphabet ("by Lurch, the office parrot"), Country Music ("by Lady Clair Sinclive and the Bad Tastes") and the extended disco version of Pimania ("as recommended by leading South American torturers). Sound effects include a Sherman tank and Concorde.

New software from Automata includes Morris Meets the Bikers (£6, Spectrum) based on the Piman character's car and with a song called Leader of the Pac on the same tape, and Yahtzee (£5) which has Dragon and Spectrum versions on the same cassette.

Fantasy and **Vortex** launched sequels to earlier successes.

Doomsday Castle (£6.50, Spectrum) is an arcade-adventure which follows Fantasy's Pyramid.

And Android 2 (Spectrum, £5.95) is the follow-up by Vortex of Android 1.

Educational specialists **Widgit** brought out a three-program tape designed to help children of five-10 with logic and reasoning. Priced at £6.25 for the Spectrum, The Humpty Dumpty Mystery and Who Killed Cock Robin? was written by primary school deputy head Gordon Askew.

Leslie Hartridge, author of Flippit (Spectrum, £9.95) and proprietor of **Lez Peranto**, brought along daughters Mary-Ann, 17, and 14-year-old Carol-Lynn to help out on the stand. Mary-Ann had helped father in the early stages by typing in his listings.

Commenting on his age, Mr Hartridge, a 59-year-old teacher, said: "With all the whizz-kids around, why shouldn't there be some whizz-dads?"

Wargamers **Red Shift** showed a pre production version of Nebula (£6.95, Spectrum) a strategy game of space conquest.

BJ (£5.95, Spectrum) will help you win at Blackjack when you play with real cards, claims author Chris Monckton, proprietor of **Chipmunk**. Mr Monckton, who developed the program on an Osborne 1, said you learn as you watch the computer play. To bring some style to his stand, he was dressed in a dinner jacket.

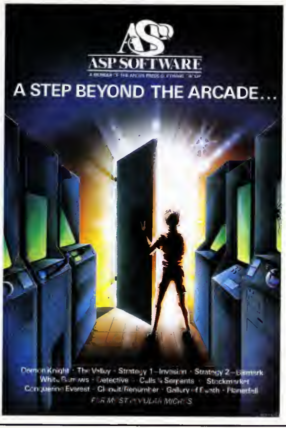
Richard Shephard, adventure specialists, showed its latest, Urban Upstart (£6.50, Spectrum), set in a town called Scarthorpe — "a town so tough even the dogs carry flick knives."

Premier showed the first in a series of six tapes written by primary school teachers to encourage creative writing. Spacewreck (Spectrum, £4.50), generates an adventure after a space crash — selecting incidents at random. Premier offers a marking and assessment service of written work for £1.50 per program.

Where to find them

Exhibitors in order of appearance in article

Carnell, *North Weylands Industrial Estate, Molesey Rd, Hersham, Surrey*
PSL, *32 Linbury Rd, Luton, Beds LU3 2PL*
Hisoft, *13 Gooseacre Cheddington, Leighton Buzzard, Beds LU7 0SR*
CDS, *10 Westfield Cl, Tickhill, Doncaster, S Yorks DN11 9LA*
Young & Jones, *10 Oak Rd, Cienfield, Portsmouth PO8 0LJ*
David Husband, *2 Gorleston Rd, Branksome, Poole BH12 1NW*
Mikro-Gen, *1 Devonshire Cotts, London Rd, Bracknell, Berks*
Starzone, *74 Wallingfor Rd, Shillingford, Oxford*
Add-On Electronics, *Units 2-4, Shire Hill Industrial Est, Saffron Walden, Essex*
OCP, *4A High St, Chalfont St Peter, Bucks SL9 9QB*
dk'Tronics, *Unit 6, Shire Hill Industrial Est, Saffron Walden, Essex CB11 3AQ*
Quicksilva, *13 Palmerston Rd, Southampton SO1 1LL*
E.F.C., *1 Whitehouse Cl, Chalfont St Peter, Bucks SL9 0DA*
Grant Design, *Bank House, Reepham, Norwich, Norfolk NR10 4JJ*
Artic, *Main St, Brandesburton, Driffield YO25 8RL*
Gilsoft, *30 Hawthorn Rd, Barry, S Glamorgan, S Wales*
Fox Electronics, *141 Abbey Rd, Basingstoke, Hants*
Silversoft, *271/273 King St, London W6*
Lydenhurst, *38 Ashley Rd, London N19*
Automata, *27 Highfield Rd, Portsmouth PO4 9DA*
Fantasy, *Fauconberg Lodge, 27A St Georges Rd, Cheltenham, Glous*
Vortex, *280 Brookside Rd, Brooklands, Manchester M23 9HD*
Widgit, *48 Durham Rd, London N2 9DT*
Lez Peranto, *distributed by Sinclair Research, Camberley, Surrey GU15 3BR*
Red Shift, *12C Manor Rd, Stoke Newington, London N16 5SA*
Chipmunk, *52A The Vale, London NW11*
Richard Shepherd, *Elm House, 23/25 Elmshott La, Slough, Berks*
Premier, *1 Hollington Rd, Upper Tean, Stoke on Trent ST10 4LG*



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Top 30

1	Atic Atac	Ultimate	Spectrum (–)
2	Lunar Jetman	Ultimate	Spectrum (7)
3	Kong	Ocean	Spectrum (5)
4	Jetpac	Ultimate	Spectrum (2)
5	Manic Miner	Bug Byte	Spectrum (3)
6	The Hobbit	M House	Spectrum (4)
7	Valhalla	Legend	Spectrum (1)
9	Chuckie Egg	A&F	Spectrum (17)
10	747 Flight Simulator	Doctorsoft	BBC
11	Pool	CDS	Spectrum (16)
12	Melbourne Draw	M.House	Spectrum (–)
13	Falcon Patrol	Virgin	CBM 64 (25)
14	Dstron	Softek	Spectrum (–)
15	Night Flight	Microdeal	Dragon (–)
16	Killer Gorilla	Program Power	BBC (10)
17	Trans Am	Ultimate	Spectrum (6)
18	Splat	Incentive	Spectrum (–)
19	Cookie	Ultimate	Spectrum (9)
20	Horace and the Spiders	Psion	Spectrum (13)
21	The King	Microdeal	Dragon (18)
22	Penetrator	M.House	Spectrum (22)
23	Hall of the Things	Crystal	Spectrum (14)
24	Cuthbert in the Jungle	Microdeal	Dragon (16)
25	Snooker	Arctic	Spectrum (–)
26	Franklins Tomb	Salamander	Dragon (–)
27	3D Dimension Destruction	Arctic	Spectrum (–)
28	Crazy Painter	Microdeal	Dragon (–)
29	Pssst	Ultimate	Spectrum (20)
30	3D Combat Zone	Arctic	Spectrum (23)

Compiled by PCS Distribution (0254 691211) and sanctioned by the Computer Trade Association Chart is for retail sales in individual outlets in the UK and Northern Ireland for the fortnight ended December 4

Top Ten programs for the Spectrum

1	Chequered Flag	Psion (4)
2	Atic Atac	Ultimate (7)
3	The Pyramid	Fantasy (–)
4	Ant Attack	Quicksilva (3)
5	Kong	Ocean (2)
6	Lunar Jetman	Ultimate (1)
7	Manic Miner	Bug Byte (5)
8	Splat	Incentive (10)
9	Flight Simulation	Psion (8)
10	Scrabble	Psion (–)

Compiled by W H Smith Figures in brackets are last week's positions

Top Ten programs for the ZX81

1	Defender	Quicksilva (6)
2	Scramble	Quicksilva (1)
3	Asteroids	Quicksilva (7)
4	Chess	Sinclair (5)
5	Space Raiders	Sinclair (9)
6	Fantasy Games	Sinclair (8)
7	Invaders	Quicksilva (–)
8	Inca Curse	Sinclair (–)
9	ZX81 Forth	Sinclair (–)
10	Maths/Geography	Sinclair (–)

Compiled by Websters Figures in brackets are last week's positions

Top Ten programs for the Dragon

1	Mined Out	Quicksilva (3)
2	Pettigrews Diary	Shards (10)
3	Night Flight	Salamander (–)
4	Ring of Darkness	Wintersoft (1)
5	Dragonfly II	Hewson (–)
6	Gridrunner	Salamander (–)
7	Champions	Peaksoft (5)
8	Lionheart	Peaksoft (–)
9	Frogger	Microdeal (6)
10	Morocco Grand Prix	Microdeal (–)

Compiled by Websters Figures in brackets are last week's positions

Top Ten programs for the VIC-20

1	Arcadia	Imagine (4)
2	Wizard & the Princess	Melbourne House (1)
3	Wacky Waiters	Imagine (2)
4	Laser Zone	Llamasoft (–)
5	Matrix	Llamasoft (10)
6	Gridrunner	Llamasoft (–)
7	Skyhawk	Quicksilva (5)
8	Sargon II	Commodore (–)
9	Money Manager	Commodore (–)
10	Panic	Bug Byte (3)

Compiled by Websters. Figures in brackets are last week's positions

Top Ten programs for the Commodore 64

1	Crazy Kong	Interceptor (6)
2	Frogger	Interceptor (1)
3	Laser Zone	Llamasoft (–)
4	Spriteman	Interceptor (10)
5	Motormania	Audiogenic (6)
6	Purple Turtles	Quicksilva (2)
7	Quintic Warrior	Quicksilva (4)
8	Aquaplane	Quicksilva (9)
9	Renaissance	Audiogenic (–)
10	Caesar the Cat	Mirrorsoft (–)

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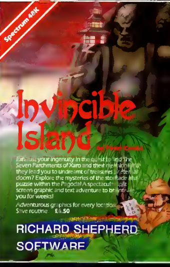
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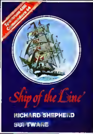
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The alien has landed — a scene from Xtro

What's this? Your scanner is telling you there's an alien landing craft approaching your base — and your experience tells you that it isn't planning a social visit.

You'd better move quickly to make sure that craft doesn't get control of the base. Use your joystick to move the base from side to side, and try to shoot the alien down with your missiles. But don't be too trigger happy, or you'll run out of missiles, and the game'll be over.

You get 10 points for each hit — and a new alien will start to make its way towards your base. How long can you fight them off?

Main variables
QW keeps score
A randomises alien position
F recognises if missile button is pressed
UI recognises if joystick is moved

How It works
100-240 print out instructions
250-390 define characters and colour
400-470 plot stars
480-660 move alien
670-730 move and fire
740-800 move left
810-870 move right
880-920 print laser
930-1060 out of missiles
1070-1160 print out score
1170-1290 end of game

Hints on conversion
CALL CLEAR clears the screen
CALL HCHAR (A,P,G) A = row, P = column G = positions ASCII character
CALL SCREEN (X) sets screen colour
CALL SOUND (N,V,G) N = length of note, V = frequency, G = volume
CALL KEY (N,V,G) N = console keyboard eg. call key (0,V,G) V = recognises if key is pressed G = recognises if same key is pressed

```
100 REM  SPACE ALIEN
110 REM  BY STEPHEN HARRIS
120 REM  1983
130 CALL CLEAR
140 CALL SCREEN(2)
150 FOR ZX=2 TO 16
160 CALL COLOP(ZX,16,1)
170 REM   INSTRUCTIONS
180 NEXT ZX
190 PRINT "SPACE ALIEN"::"YOU CO
NTPOL THE BASE"::"AT THE BOTTOM
OF THE SCREEN"::"BY USING THE JO
YST STICK. "::
200 PRINT "SHOOT DOWN THE ALIEN
AND"::"PREVENT IT FPOM LANDING B
Y"::"PRESSING THE FIRE BUTTON"::
210 PRINT "BUT BEWARE... YOU ONL
Y HAVE"::"A LIMITED AMOUNT OF MI
SSILES"::
220 PRINT "SCOPING=10 POINTS PEP
 HIT"::"NOW PRESS ANY KEY "
230 CALL KEY(0,TYU,UYT)
240 IF (TYU=0)+(TYU=-1)THEN 230
250 CALL CLEAR
260 REM   DEFINE CHAPACTERS AND
SET UP SCREEN
270 CALL COLOR(14,12,1)
280 CALL CHAR(159,"1818181818181
818")
290 CALL COLOR(16,16,1)
300 D=16
310 Z=2
320 CALL CHAP(139,"1CEE7DFD5FDFF
7D")
330 CALL HCHAR(24,1,139,32)
```

```
340 CALL CHAR(42,"1818183C7EFFFF
5A")
350 CALL CHAR(127,"99C3A5FFE7423
C42")
360 CALL COLOR(2,7,1)
370 CALL COLOP(12,8,1)
380 CALL HCHAR(23,D,42)
390 CALL CHAR(149,"0000001000000
000")
400 REM  PLOT STARS
410 FOP TU=1 TO 30
420 CALL COLOR(16,16,1)
430 KJ=INT(PND*32)+1
440 PI=INT(RND*24)+1
450 IF (PI=24)+(PI=23)THEN 440
460 CALL HCHAR(PI,KJ,149)
470 NEXT TU
480 REM  MOVE ALIEN`
490 A=INT(PND*30)
500 IF A>10 THEN 530 ELSE 510
510 A=2
520 GOTO 570
530 IF A>20 THEN 560 ELSE 540
540 A=16
550 GOTO 570
560 A=30
570 CALL HCHAR(Z,A,127)
580 CALL HCHAR(Z,A,32)
590 CALL SOUND(30,-1,0,110,0)
600 Z=Z+1
610 IF Z=23 THEN 620 ELSE 680
620 CALL HCHAR(23,D,127)
630 CALL SOUND(1000,-5,0,990,0)
640 PRINT "THE ALIEN HAS LANDED
ON YOUR BASE"
650 GOTO 1171
660 GOTO 680
670 REM  MOVE AND FIRE
680 CALL KEY(1,F,G)
690 CALL COLOP(15,INT(PND*13)+3,
1)
700 IF (F=0)+(F=-1)THEN 710 ELSE
 890
710 CALL JOYST(1,UI,AI)
720 IF UI=-4.0 THEN 750 ELSE 730
730 IF UI=4.0 THEN 820 ELSE 490
740 REM  LEFT
750 CALL HCHAR(23,D,32)
760 D=D-14
770 IF D<2 THEN 780 ELSE 790
780 D=2
790 CALL HCHAP(23,D,42)
800 GOTO 490
810 PEM  RIGHT
820 CALL HCHAP(23,D,32)
830 D=D+14
840 IF D>30 THEN 850 ELSE 860
850 D=30
860 CALL HCHAR(23,D,42)
870 GOTO 490
880 REM   PPINT LAZEP

890 CALL VCHAR(2,D,159,21)
900 CALL SOUND(30,1000,0)
910 EP=ER+1
920 IF ER>4 THEN 940 ELSE 1030
930 REM  OUT OF MISSILES
940 PPINT "YOU RAN OUT OF MISSIL
ES"
950 FOR A=-8 TO -5
960 B=B+110
970 C=10
980 CALL SOUND(500,A,0,B,C)
990 C=C-2
1000 NEXT A
1010 GOTO 1020
1020 GOTO 1171
1030 CALL VCHAR(2,D,32,21)
1040 IF D=A THEN 1080 ELSE 1050
1050 CALL SOUND(30,-7,0)
1060 GOTO 490
1070 REM  PRINT OUT SCOPE
1080 QW=QW+10
1090 CALL SOUND(100,-7,0)
1100 ER=0
1110 Q$="SCORE="&STR$(QW)
1120 FOR T=1 TO LEN(Q$)
1130 CALL HCHAR(1,T+1,ASC(SEG$(Q
$,T,1)))
1140 NEXT T
1150 Z=2
1151 CALL COLOR(12,INT(RND*14)+3
,1)
1160 GOTO 490
1170 REM  END OF GAME
1171 IF QW>AW THEN 1172 ELSE 118
0
1172 AW=QW
1180 PRINT ::" YOUP SCORE IS ";Q
W::
1181 PRINT "HIGH SCOPE=";AW
1190 PPINT "PPEIS PEDO OR BACK"
1200 CALL KEY(0,DI,ED)
1210 QW=0
1220 Z=2
1230 ER=0
1231 B=0
1240 IF (DI=15)+(DI=57)THEN 100
1250 IF (DI=6)+(DI=56)THEN 1270
1260 GOTO 1200
1270 CALL CLEAR
1280 PPINT "* -PRESS ANY KEY TO
BEGIN- *"
1290 GOTO 230
```

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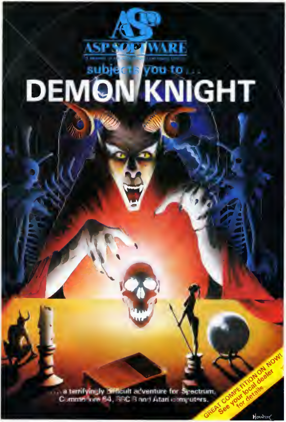
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At last its here, specially written for the 64, by the author of "JACKPOT" the ultimate Fruit Machine program for the VIC **£5.50**
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Plug in and go places

You can find yourself in some very funny places when you set out on a computer adventure. Before you go, read all about them in our reviewers' reports

Black Tower TI-99/4A £5.95

Lantern Software, 4 Haffenden Road, Tenterden TN30 6QD

Black Tower is a text-based adventure game of the rescue-the-damsel variety

There are 10 locations to visit, so far as I know and of course you must be in possession of the right articles or pieces of information in order to proceed to the next one

Defeat can come in many different ways and I must have found them all When this happens it's back to the old castle gate and start again

Commands are entered in the usual verb-noun form, though short sentences are also accepted.

If your input is too wordy, however, it may cause the program to fail as I discovered right at the start

I thought "Look for a door" was a good idea, but it was too much for the computer, so the game stopped right there Oddly enough "Look for door" was accepted

I managed to solve this game after three to four hours spread over a couple of days Since this is my first attempt at an adventure game I take this to mean that Black Tower is quite easy to beat The alternative is that I am very talented

I found this game quite enjoyable, though once solved, that's it Instructions are adequate, but a list of keywords would be nice

C E

instructions	50%
playability	75%
graphics	n/a
value for money	60%

★ ★ ★

2003 – A Space Oddity 48K Spectrum £4.95

dk'Tronics, Unit 6, Shire Hill Industrial Estate, Saffron Walden, Essex

Mark well the name of this program because it certainly is an oddity

Set in outer space, you have to find your way back to earth via a series of adventures which seem to have no point

There are three possible exits to any scene, choosing from either north, south, east, west, up or down These exits can be either a door, space ship, space warp, ladder, or space shield

At some of the exits there are challenges to be met with a choice of fighting with either a laser or your mind Of course, if you want to be chicken, then you can run

Treasure is lying about in various locations, and you either have to fight to get it or it's there for the taking All the exits are drawn for you, and there is one option I'm sure that you will take

Drawing the time or space warp, takes up quite a bit of time, and pressing G will ensure that they are drawn no more

I have a feeling that the title was written tongue in cheek, and the game too It makes for light relief in the serious world of space blasters and hyper-drives **B B**

instructions	100%
playability	75%
graphics	60%
value for money	100%

★ ★ ★ ★ ★

The Island 48K Spectrum £5.95

Virgin Games, 61-63 Portobello Road, London W11 3DD

An adventure game with two differences from Virgin! Not for them a complex manual, part of the fun is find out what the computer understands And, yes, this is a graphic adventure, but very different from the Hobbit

The adventure is set on some islands Given the treasure map, you must navigate to the correct island, find the treasure and return with it

When you start your adventure, this appears to be an all text program If, however, you manage to penetrate the fog bank en-route to the treasure island, you suddenly find yourself in the midst of a "dodge the rocks" action sequence much like an arcade game

Fail, and you are sunk — sink and you fail Successful navigators reach the Island, but beware the swamp! More action sequences follow

There is, however, a criticism In the original text adventures like Adventure 1 from Abersoft, taking the "wrong" route sometimes paid off and when it didn't you certainly weren't killed off but simply found yourself in an unproductive region or a very tight spot!

On the Island, take the "wrong" path and you will find yourself dead very quickly **D.M**

instructions	n/a
playability	80%
graphics	60%
value for money	95%

★ ★ ★ ★ ★

Kraal's Kingdom VIC-20 plus 16K £4.95

Buntasoft, 149 Monks Walk, Buntingford, Herts SG9 9DS

Writing a good adventure is, in many ways, much more difficult than you would think The problems are exacerbated by lack of memory

This author attempted to overcome this lack by writing the game in two parts This nearly works, but is foiled by some appalling mistakes in technique

The scenario is standard enough You charge around the place endeavouring to acquire the necessary impedimentia to rescue the princess

The descriptions of the locations are good and the screen handling adequate The main black spot is the interpretation

The author uses the method of expecting certain fixed commands only This means that rather than a fixed two word command, several words may be expected This saves memory but makes play a nightmare

As a result, I got stuck on a plank in the middle of a lake Only by cheating could I find which specified phrase was expected.

I found the game a little dry and lacking humour In spite of these moans, at the price it is very good value and is guaranteed to drive you to the extremes of despair (as any adventure should) I wouldn't, however, recommend it for a beginner **A W**

instructions	60%
playability	60%
graphics	n/a
value for money	90%

★ ★ ★ ★ ★

Tamb of Dracula 48K Spectrum £6.95

K'Tel, 620 Western Avenue, London W3

This game is another variation of the multi level adventure/maze type Alas it is hardly inspired

You must enter Dracula's chamber system and delve into as many levels as possible prior to sunset and Dracula's awakening After this your progress becomes a little harder

Other horrors to be avoided are ghouls, zombies, and slime pits When you light on a surprise vault you may be lucky enough to add to your valuable (and useful) collection of silver stakes

These can be used to kill opponents or pay for a glimpse of the map of the level in which you are currently located I must admit I did not venture very deep but I hardly found it compelling

The game is not very dynamic The graphics are average, but certainly not startling

3D views of vaults are given but add little to what you can imagine — helpful only if you have a poor sense of direction

Use of colour is fair and there is the usual round of morbid minor key tunes

All in all there is nothing new here in concept or execution, so I think it must join a legion of similar programs that are something less than top flight Certainly at £7 it is overpriced

P.C

instructions	80%
playability	70%
graphics	50%
value for money	60%

★ ★

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ONE MAN'S VIEW

How you can spot the cowboys

With home computers being as popular as they are today, more and more software companies are setting up and marketing their programs.

In the run up to Christmas many of these will be sold to both newcomers and experts in this field.

About half of the buyers of these programs will not be totally satisfied with what they get.

The fact of the matter is that there are still a lot of cowboys lurking behind glossy cassette inlay covers and flashy advertisements.

So how do you tell the difference between a high quality software company and one that is only after your hard earned cash?

The best way is to see the software working before you buy it. Unfortunately this is not always possible so you may have to judge it by other means.

The second best way is to buy from companies who print screen displays on their adverts and/or cassette inlay cards.

Companies who do this obviously want you to see the high quality of their programs — they don't need an artist to paint you a picture of what the game could, but will not, be like.

The third way of assessing programs is to read software reviews, such as the ones in this magazine. They will tell you the theme, quality, value for money and faults of the program. They are of course dependent on the reviewer's taste in programs, but even so will be given a fair review.

When looking around at programs you should expect top quality software.

Games should be of arcade quality. Expect them to be written in machine code, make full use of graphics and sound and exploit your computers abilities. Text/logic games should be well presented and easy to use.

Educational software should be easily understood and useful, not a computerised gimmick. It should be able to help you learn about a specific subject easily.

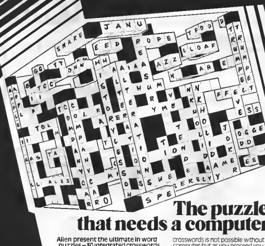
Utility and business software should make full use of your computer system. Ease of use and a neat output is essential in this type of application.

If there is a similar but better program available at a higher price then I would advise you to consider the better one — there is nothing worse than having to go about things the long way when there is an easy short cut available.

Software standards will only be as high as you set them. If you insist on the best, then the rubbish will dwindle away and more high quality software will be available at prices we can all afford.

Kevin Irving
Software Reviewer
Carlisle,
Cumbria

The ultimate Crossword



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Alien present the ultimate in word puzzles – 30 integrated crosswords which form a cube

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Features: Solution Store, Instant Display, Anagram Function, Character Location in memory.

This is a tough puzzle with a degree of difficulty – it's the ultimate but it's not impossible. Full instructions are included with the programme.

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Kidding around with your micro

These five programs are child's play — so their producers say. See what our reviewers made of them

First Steps with the Mr. Men 32K BBC £8.95

Mirrorsoft, Holborn Circus, London EC1P 1DQ

Using computers with young children is not as easy as people assume — it very much depends on the quality of software that is available.

This package is one that works — it's a well thought-out and executed set of programs which will thrill many children in the four to eight age group.

The cassette contains four programs which are graded in difficulty.

The first, Mr Greedy's Ice Cream Hunt, is simply an attempt to improve hand/eye co-ordination and uses colour to emphasise direction.

Mr Silly's Hat Game is the weakest program on the cassette because it takes far too long to finish. The aim here is to select the hats that Mr Silly wants, learning shape and colour matching in the process.

The final two games feature Mr Forgetful, who has lost either his clothes or letters of the alphabet in his 14 wardrobes. This is basically pair matching, but is very well done except for the tune at the end.

The package also contains a 24-page full colour book of Roger Hargreaves stories to explain, and interest the children in the games, plus a direction key template.

D.C.

instructions	100%
ease of use	90%
display	90%
value for money	95%

★ ★ ★ ★ ★

Pathfinder Spectrum £5.95

Widgit Software, 48 Durham Road, London N2 9DT

Before numbers, or anything else, make sense, children need to be able to explore and practise with basic concepts.

Here Widgit offers a real learning opportunity for pre-school and primary age children.

In a series of four well presented maze games featuring animals, the child can practise counting, explore such concepts as up, down, left and right, and begin to develop the ability to plan moves in advance.

You may be tempted to ask why these are important. Try driving, playing chess, programming in BASIC, using a map, or finding your way home without them!

Though the programs are largely in BASIC, they are well written, colourful, attractive and make good use of sound.

Much more important in an educational sense, they are well structured and purposeful, providing useful experience in a way that would be difficult without a computer.

Well done, Widgit! A real application for a home computer, cleverly executed and which doesn't cost the earth.

D.M.

instructions	75%
ease of use	90%
display	65%
value for money	100%

★ ★ ★ ★ ★

Fun To Learn 32K HHC £6.95

Shards Software, 189 Eton Road, Ilford, Essex IG1 2UQ

This set of programs is written by a teacher and aimed at the six to 12 year old age group.

Count is a simple counting exercise which should only appeal to the very young. I wasn't impressed.

Mixer is a little better. It displays a mixed up word which the child decodes. Words can be selected by the computer, or the children can enter their own words for a friend.

Calculator is a simple simulation of a pocket calculator. Quite effective, but I am a little unsure of its educational value.

Starship is probably the best part of the program. Similar to Hangman, the object is to find the word before your starship is destroyed. This should appeal more to children because of its competitive element.

Codebreaker allows the child to code or decode a word. Again I have doubts about its educational value.

The programs are well written. The display uses large double size teletext characters which is very good for a group of children to observe together.

Colour is used to good effect and occasional musical pieces liven up the program. It is a good example of how educational software should be written, but some of the games lack imagination.

G.T.

instructions	75%
ease of use	90%
display	100%
value for money	65%

★ ★ ★

Quick Thinking 48K Spectrum £8.95

Mirrorsoft, Holborn Circus, London EC1P 1DQ

Although they deal with addition, subtraction and multiplication of numbers, these programs will not teach such complex processes. They merely provide the opportunity to practice what has already been learned in an enjoyable way.

The presentation of the cassette is excellent, both visually and textually.

The programs — written for Mirrorsoft by Widgit — are equally good, with superb use of colour and shape, though the Spectrum's screen shimmer makes reading numbers difficult.

SumVaders has a mother ship dropping robots: add the numbers on each to destroy the robot before it reaches earth. When five land the game is over.

In Robot Tables, the child must decide whether a piece of raw material is to be accepted or rejected before reaching the robot making machine.

To be acceptable, they must have the next number in the chosen table sequence, for example 2, 4, 6 ... ? Make the wrong choice and all sorts of fascinating things happen. Great graphics!

Criticisms? Robot Tables practises tables in sequence, but we use them out of sequence in everyday life. It needs a random element.

D.M.

instructions	90%
ease of use	95%
display	100%
value for money	90%

★ ★ ★ ★ ★

School Maze Dragon £10.95

Dragon Data, Kenfig Industrial Estate, Margam, Port Talbot

Some software houses show an annoying tendency to produce programs for children of a far lower standard than those aimed at adults, but with a similar (or in this case, higher) price-tag.

This is a prime example of the phenomenon — a fairly short and unsophisticated BASIC program which I feel should have been developed much further before being unleashed onto the public.

It is an adventure type game with a few short distractions thrown in.

A map of the school is shown at intervals, but movements within the program are not always as the map would lead you to expect.

At some points you use the cursor keys to move an arrow on the map — it is an upward pointing arrow regardless of the direction in which you are going, and the keys used do not auto-repeat.

In the school gym you are invited to play basketball: the previous position of the ball is not blanked out as it moves, so you get a trail of black squares across the screen.

The options offered in the Music and Art rooms are similarly crudely done.

To be fair, though, I must add that my children and their friends liked it.

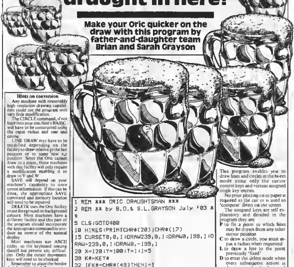
M.N.

instructions	50%
ease of use	60%
display	10%
value for money	10%

★

There's a terrific draught in here!

Make your Oric quicker on the draw with this program by father-and-daughter team Brian and Sarah Grayson



Hints on conversion

Any machine with reasonably high resolution drawing capabilities could use the program with very little modification

The CIRCLE command, if not built into your machine's BASIC will have to be constructed using the input radius and sine and cosine

LINE DRAW may have to be modified depending on the facility to draw relative to the last position or to some new x,y position Since the Oric cannot draw to a point, those machines with this facility will only require a modification enabling it to draw to V and W

SAVE will depend on your machine's capability to store screen information If this can be done, the appropriate SAVE command and memory location will need to be inputted

DELETE uses the Oric facility to use foreground on background colours Most machines have a different facility and this part of the program should incorporate the appropriate command to produce an inverse of the normal display

Most machines use ASCII codes so the keyboard sensing should not present any difficulties Only the cursor movement keys will need to be checked

Remember to place the border slightly inside the full screen size to avoid the program stopping because it is out of range

How it works

5 clears the screen and sets up the title sequence and instructions
10-20 draws the border, sets the initial cursor position, normal mode, and pixel movement (5)
30-130 reads the keyboard input and resets the variables or sets up mode
200-206 senses if a line is already on the screen to avoid wiping it out as the cursor flashes
400-602 title and instructions
1000-1040 tape save and reset or program termination

```
1 REM *** ORIC DRAUGHTSMAN ***
2 REM ** by B.D.& S.L.GRAYSON July '83 *
*
5 CLS:GOTO400
10 HIRES:PRINTCHR$(20);CHR$(17)
15 CURSET0,0,1:DRAW239,0,1:DRAW0,199,1:D
RAW-239,0,1:DRAW0,-199,1
20 X=120:Y=100:T=1:I=5
30 K$=KEY$
32 IFK$=CHR$(49)THENI=1
33 IFK$=CHR$(50)THENI=2
34 IFK$=CHR$(53)THENI=5
35 IFK$=CHR$(48)THENI=10
40 IFK$=CHR$(0)THENX=X-I
50 IFK$=CHR$(9)THENX=X+I
60 IFK$=CHR$(10)THENY=Y+I
70 IFK$=CHR$(11)THENY=Y-I
80 IFK$="P"THENCURSETX,Y,T:GETK$:GOTO32
85 IFK$="Q"THENTEXT:RUN
90 IFK$="C"THENCURSETX,Y,I:PRINT"What ra
dius?":INPUTR:CIRCLER,T:GOT
030
```

This program enables you to draw lines and circles in the hi-res mode using only the cursor control keys and various assigned single key entries

No prior plotting on to paper is required as the cursor is used to 'compose' direct on the screen

The assigned keys are self explanatory and detailed in the program they are

- **P** to fix a point to which lines may be drawn from any other cursor position
- **C** to draw a circle, you must input a radius when requested
- **L** to draw a line to the point previously 'fixed'
- **D** to enter the delete mode when every subsequent action is drawn in the background colour (wiping out a previous foreground feature)
- **N** to return to the normal mode
- **Q** returns to the instructions but beware, all your work will be lost
- **S** to save the drawing on the screen Position a blank piece of tape and start to record before pressing S

Cursor movement is achieved with the arrow keys, and the distance moved may be varied by 1,2,5 or 10 pixels by pressing 1,2,5,0 at any time Best control will be achieved by using 5 or 10 until you are near to your desired position, then changing 1 or 2 for final positioning

```
95 IFK$="S"THENGOTO1000
100 IFK$="F"THENCURSETX,Y,1:CIRCLE4,1:CL
S:PRINT"Line draw":U=X:W=Y

110 IFK$="L"THENCURSETU,W,0:CIRCLE4,0:CU
RSETX,Y,1:DRAW(U-X),(W-Y),T

120 IFK$="D"THENPRINT"Delete mode":T=0:G
OTO30
130 IFK$="N"THENCLS:T=1:GOTO30
200 IFPOINT(X,Y)=-1THENCURSETX,Y,0:WAIT5
:CURSETX,Y,1:GOTO30
201 IFPOINT(X,Y)=0THENCURSETX,Y,1:WAIT5:
CURSETX,Y,0:GOTO30
400 POKE618,2:PAPER0:INK7
401 IFPEEK(524)>127THENPRINTCHR$(20)
402 PLOT16,0,20:PLOT17,0,"ORIC":PLOT22,0
,16
404 PLOT12,12,20:PLOT13,12,"DRAUGHTSMAN
" :PLOT25,12,18
450 WAIT175:CLS
455 PRINT:PRINT:PRINT:PRINT
460 PRINT"This Oric program allows you t
o draw"
462 PRINT"lines and shapes in the comput
er's"
464 PRINT       "HIRES mode.
468 PRINT        "Only a few single key co
mmands "
468 PRINT       'are  necessary.":PRINT
469 PRINT       'The finished drawing may
be"
470 PRINT       "saved onto tape and subse
qently"
471 PRINT       "reloaded and displayed, t
hough"
472 PRINT       "not modified."
475 WAIT1500:CLS
500 PRINT"          These are:-":PRINT
506 PRINT"The normal cursor control keys
":PRINT
507 PRINT"P - To fix a point":PRINT
508 PRINT"C - To draw a circle - you mus
t input     a radius":PRINT

509 PRINT"F - To fix a point to which yo
u may"
     510 PRINT"     draw lines from othe
r points':PRINT
                 511 PRINT"L - To draw a
line from the current"
512 PRINT"     position to the 'F' point"
:PRINT
513 PRINT"D - To enter the delete mode,"

514 PRINT"     Lines and circles when dra
wn in "
515 PRINT"     the normal way will be`era
sed":PRINT
518 PRINT"N - To return to0normal mode":
PRINT
517 PRINT"Q - To quit the program and re
turn"
518 PRINT"     to this list. ALL IS LOST!
":PRINT
524 PRINTCHR$(27) "L     Press SPACE to
continue"
525 GETZ$:IFZ$=CHR$(32)THENCLS
528 PRINT:PRINT:PRINT:PRINT:PRINT:
530 PRINT"S - This automatically saves t
he    "
531 PRINT                    '     finished dr
awing on tape'
532 PRINT"    REMEMBER TO POSITION SOME
BLANK"
533 PRINT"    TAPE AND START THE CASSETT
E           BEFORE PRESSING
 'S'"
534 PRINT"    To recover the drawing typ
e"
535 PRINT"    HIRES before 'CLOAD'"
536 PRINT:PRINT:PRINT:PRINT
550 PRINT'  The distance the flashing cu
rsor"
552 PRINT"  moves may be varied at any t
ime'
554 PRINT"  by inputting 1,2,5,0 for1,2,
5,10"
556 PRINT"  pixels.It is normally 5."
598 PRINT:PRINT:PRINT:PRINT:PRINT

2600 PRINTCHR$(27)"L      Press SPACE t
o begin"
602 GETZ$:IFZ$=CHR$(32)THENGOTO10
1000 PRINT"saving in progress"
1010 CSAVE"",A40960,E49000,AUTO
1020 CLS:PRINT"Saving complete. Do you w
ish to continue Y/N ?"
1030 INPUTR$:IFR$="Y"THENGOTO10
1040 IFR$="N"THENTEXT:CLS
```

At £99 the Manta Printer is a bargain!

Whatever image or text is displayed on your screen the Manta Printer can reproduce it – graphics or characters. Running quietly and quickly – at 80 characters per second – the Manta produces 40 column width print-out in upper and lower case letters and graphics.

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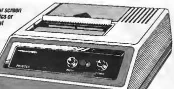

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Send your letter to Letters, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Don't forget to name your computer — the best letter could win £5-worth of software. Got a problem with your micro? We'll soon be starting a queries page, so send your technical questions to Queries at the above address

The joy of joysticks

I have been a TI owner since the end of April this year, and am very grateful to the few magazines such as yours, which take a real interest in the Texas micro.

However, very few of the programs in magazines such as yours seem to use the Texas joysticks Though these joysticks are not the ultimate in good design, they can add another dimension or variation to games that would otherwise become boring

Now before anyone tells me to get off my peripherals plug in my modules and write a program myself, I'd like to say that I am doing just that — it will be a maze game, using joysticks, and when it has been fully debugged you might just get to see it

Meanwhile, here is a joystick routine for the Apple Scrumping game printed in HCW 37 Replace lines 395 to 440 with the following

```
395 CALL JOYST(1,A,B)
400 CALL HCHAR(Y,X,
    32)
405 IF (A<>-4)+(B<>
    0) THEN 415
410 X-X-1
415 IF (A<>4)+(B<>0)
    THEN 425
430 X=X+1
425 IF (A<>0)+(B<>4)
    THEN 435
430 Y-Y-1
435 IF (A<>0)+(B<>
    -4) THEN 445
440 Y=Y+1
```

This routine can, with slight modification be used on many other games

By the way, I typed this letter myself, in less than 10 minutes, but prior to obtaining my Texas this could have taken anything from two to three months without the practice on a real keyboard

I doubt this improvement would have been the same using a Spectrum or Oric! I reserve the right to remain a bad speller, though

Tony "Tooks" Huby, Bramley, Leeds

Peace on earth — and elsewhere

I appeal to everyone who will be buying, giving or receiving computer games this Christmas to stop and think before making their choices

I put it to you that encouraging young people to play games the purpose of which is to kill, bomb, shoot, conquer, destroy and show as much aggression as possible is as sick as forcing them to watch "video nasties"

In fact it is sicker, because with computer games they must actively participate

It is a tragedy that while British home micro software leads the world in technical quality, the vast majority of the themes of "games" appear to have been thought up by the minds of mass murderers to give pleasure to admirers of Adolf Hitler, Jack the Ripper, Attila the Hun and Denis Nilsen

Look through the adverts in this magazine and feel shame We have allowed this to happen, and we are all responsible programmers, advertisers, magazines and shops

We are using the greatest innovation of our age to teach kids that killing is OK Pick your presents with care Happy Christmas Peace and goodwill to all Mankind, and Aliens

Mel Croucher, Automata, Portsmouth, Hants

ER
POST OFFICE

Computer talk from Norfolk

I seem to have achieved fame — or is it notoriety? — since having a letter published in HCW 31 Not that I'm complaining, as several people took the trouble to get in touch with me — in this neck of the woods, computerising females are a bit thin on the ground, and we need to stick together

Is there a postal club for adventure game players? If not, would anyone be interested in starting one? I work full time, and don't honestly have the time to run a club, but I would be willing to help

On the subject of adventure games, has anyone found all seven pieces of parchment in Invincible Island (Spectrum 48K)? I've found six, and can't find number seven Help!!?!

If your child is anything like my daughter, she'll spend hours and hours drawing and colouring patterns The following two lines help keep them quiet over Christmas!

```
10 PRINT (Your choice of
    graphics, UDGs,
    spaces),
20 GOTO 10
```

This gives a screenful of pattern, and can easily be altered by adding or removing shapes or spaces Enterprising parents can, by adding a few more lines, allow the child to choose paper and ink colours

On to the complaints section I've had dealings by post with four companies Three out of the four have been excellent — Hewson, Gilsoft and Virgin Games Who gets the booby prize? Quicksilva, that's who I sent off a cheque to them for their Game Lords Club It was cashed promptly, but it was over a month before I heard anything from them Pity Especially as some of their games are so good

A Bates (HCW 38) (No relation as far as I know) is lucky to have got her husband interested in computing So far, apart from playing the odd game, the most interest mine has shown has been when I put in a simulation of a two-stroke engine

He liked that, and thought that it might be of some use! Oh well I shall just have to write a program of motorbike racing!

Best wishes, Happy Christmas, and keep up the good work

Patricia Bates, North Walsham, Norfolk

Mark Eyles of Quicksilva said "The Game Lords Club is handled by a professional mail order company, and they're normally very quick — perhaps Mrs Bates's order got held up by the Christmas post If she has any further problems, she should contact us at Quicksilva directly, and we'll do our best to help By now she should have received the first issue of the Games Lord magazine anyway, which should be some consolation — we think it's really good!"

Cheat the Jetman

Amaze your friends with your high score on Jet Pac, thanks to a slight scoring fault in the program

On the fourth sheet of Jet Pac there are plane-shaped objects which, when they explode, give you points If the jetman is placed on the top right hand cloud he cannot be killed

So if the television is switched off and the computer left on, the program will continue to accumulate a steady score, and if left long enough any score can be reached without laying a finger on the keyboard!

M Brunning, Bispham, Blackpool

The sceptre of Cadarian

Deep underground, evil things await those foolhardy enough to venture into Radro. Marc Freebury's adventure game was written for an Atari 800 with discs, but you can easily convert it to cassette

"And whosoever recovers the sceptre will be made heir apparent to the throne of Cadarian Signed, his most royal majesty Cydran IV, midsummer's day"

The herald remounted and spurred his horse on, to repeat the message in the next village

Radro They all knew that name, he reflected, yet few remembered the Underground Fortress of Evil at the height of its power.

The Castellan had often spoken of it, on the dawn watch "Many were the fallen Some say 10,000 warriors breaching the upper defences and 10 times that number in a futile attempt to secure the labyrinth beneath

"But ours was the victory, if not the war Radro was tamed if not broken, and the entrance sealed with mighty magicks In our vanity we thought it ended"

The old man would shake his head "Then fell forces attacked the palace, and removed the sceptre of rule, without which our king is powerless And then to find the entrance to Radro unsealed evil times to be sure. That is why you, young man, declare the challenge to the people

Again the silver-grey hair would shake back and forth "But few of true noble blood yet live, and none will dare the entrance. The memory of terror lies too strong upon the land"

The herald urged his mount on, shivering despite the clear sky and golden sun overhead

How to play

This game is so big that I had to split it into two programs Together they occupy over 200 disc sectors

In order for the game to work, the first program should be called 'CASTLE BAS' and the second 'MAZE BAS'

The present version is for disc only, but conversion to cassette is a simple matter First, all references to 'NAME DAT' should be removed, as should all XIO statements

Change all occurrences of "D" to "C" Lastly, insert a piece of code at the front of MAZE BAS to ask for the player's character name.

In order to sustain interest, the game has been made strategically complex although it is hoped that play itself is a simple matter

When entering the castle for the first time, ask for a new character (note most one letter user replies do not require you to press return) Keep a close eye on your gold supply as you wander around the market stalls

If you wish to skip an option at any time or wish to avoid paying for something, type a zero When you are sufficiently prepared, use option 5 from the courtyard to enter the maze

Once at the maze entrance, you can retrieve a previously saved level by telling the doorwarden, and giving the name the level was saved under (usual eight-letter limit applies)

Once you descend the stairs, you will be given a three-dimensional view of the road ahead At this stage it is a good idea to start drawing a map so that you can find your way back to the original stairs

Movement is via the keys W,A and D — use A and D for turning on the spot and W to advance one step.

The maze plotter is written to be very fast, and as such has one slight defect If two consecutive 'blocks' of the 20 by 20 grid are open to your left or right, a ghost wall will be created These are easily spotted and should prove only a minor irritant at first

Eventually you will encounter something Treasure is randomly distributed and is not carried by monsters, since they have no use for objects

Speaking of monsters, combat is also likely Up to six monsters may attack simultaneously and can easily hack you to pieces if you are foolhardy (or brave as some would have it) enough to stand your ground

There are five combat options First, hack at one monster with your sword Second, run away

Third is an option to cast one of the four spells available These can only be cast if you have enough spell ability (gained from magical objects)

The first spell is 'sleep' It will cause one monster to become drowsy, allowing you one free swipe

Next is Fireball causing one monster to lose nearly all its hit points

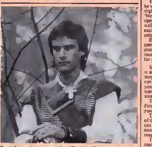
Third is Rock To Mud This lashes out magical power and disintegrates one block of the maze around you Naturally this display of power will cause the monsters to be temporarily cowed

Lastly is Teleport, which moves you at random

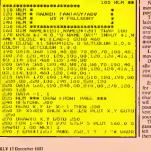
Death It reaches us all eventually If your hit points reach zero, you die Coming out of the maze restores all lost hit points

Experience points are gained for monsters killed, and when enough have accrued, your character's level will increase, as will the upper limit of his hit points Your rating as an adventurer will be indirectly tied to your level

That is a basic outline of the game Of course, there are things left unexplained but you'll find them out (har har)'



Ready for combat — a scene from Hawk the Slayer



```
                                   100 REM **
************************
110 REM *                          *
120 REM * RADRO I FANTASY/ADV      *
130 REM *       BY M FREEBURY      *
140 REM *                          *
150 REM ***************************
160 DIM NAME$(20),NAME2$(20) TRAP 180
170 OPEN #1 4 0,"D NAME DAT" INPUT #1,N
AME$ CLOSE #1 FLAG=1 GOTO 460
180 CLOSE #1 GRAPHICS 8 SETCOLOR 2,0,0
COLOR 1 SETCOLOR 1,0 0
190 DATA 360 120,40 80 70,80,70,100,40,
100,70 120,410,120,105,80,120,120,416,1
03 114 103 460 120 140,80
200 DATA 360,120,40,80,70,80,70 100,40,
100 70,120,410,120,105,80,120,120,416,1
03,114,103,460,120,140,80
210 DATA 170,100,140,120,510,120,190,80
 220,80,220,100,190,100,220,120
220 DATA 560,120,240,80,270,80,270,120,
240 120
230 DATA -1, 1
235 REM *** DRAW FRONT PAGE ***
240 RESTORE 200
250 READ X,Y IF X=-1 THEN 280
260 IF X>320 THEN X=X 320 PLOT X,Y GOTO
 250
270 DRAWTO X,Y GOTO 250
280 FOR I=40 TO 270 STEP 5 PLOT 160,0 D
RAWTO I 80 NEXT I
290 ? CHR$(125) POKE 752,1 ? ? "* RADR
```

```
0   THE UNDERGROUND FORTRESS *"
300 POKE 709,15
310 DIM DELAY(5):DELAY(1)=75:DELAY(2)=1
50:DELAY(3)=250
315 REM *** PLAY INTRO ***
320 RESTORE 370:FLAG=0
330 READ NOTE,TYPE:IF NOTE=-1 THEN 450
340 SOUND VOICE,NOTE,10,8:SOUND VOICE+1
,NOTE+1,10,8
350 FOR I=1 TO DELAY(TYPE):NEXT I
360 GOTO 330
370 DATA 72,1,76,1,72,1,76,1,72,1,96,1,
81,1,91,1,108,2,0,1,182,1,144,1,108,1
380 DATA 96,2,0,1,144,1,114,1,96,1,91,2
,0,1,144,1,72,1,76,1,72,1,76,1
390 DATA 72,1,96,1,81,1,91,1,108,2,0,1,
182,1,144,1,108,1,96,2,0,1,144,1,91,1,9
6,1,108,1,0,2
400 DATA 96,1,91,1,81,1,72,3,121,1,64,1
,72,1,81,3,128,1,72,1,81,1,91,3,144,1,8
1,1,91,1
410 DATA 96,2,144,1,72,1,72,1,85,1,76,1
,72,1,76,1,72,1,81,1
420 DATA 72,1,76,1,72,1,96,1,81,1,91,1,
108,2,0,1,182,1,144,1,108,1
430 DATA 96,2,0,1,144,1,114,1,96,1,91,2
,0,1,144,1,72,1,76,1,72,1,76,1
440 DATA 72,1,96,1,81,1,91,1,108,2,0,1,
182,1,144,1,108,1,96,2,0,1,144,1,91,1,9
6,1,108,1,-1,1
450 FOR I=1 TO DELAY(2):NEXT I:SOUND 0,
0,0,0:SOUND 1,0,0,0
455 REM *** STRING DECLARATIONS ***
460 DIM ARM$(100)
470 ARM$="010 PADDED ARMOR020LEATHER AR
MOR060 CHAIN MAIL  100 PLATE MAIL  200
PLATE +1     "
480 DIM SH$(40):SH$="010 SMALL SHIELD05
0 LARGE SHIELD080 +1 SHIELD    "
490 DIM WP$(170)
500 WP$="001 SHORT SWORD     005 BROAD
SWORD     020 LONG SWORD      050 TWO H
ANDED SWORD"
510 WP$(81)="100 +1 SWORD        150 +2
 SWORD        300 LIFE STEALER     900 V
ORPAL BLADE     "
520 DIM SPELL$(40):SPELL$="SLEEP     FI
REBALL  ROCK/MUD  TELEPORT  "
530 OPEN #1,4,0,"K:"
540 IF FLAG=1 THEN FLAG=0:GOTO 2150
550 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(561)*256:POKE DL+3,71:POKE DL+
6,7
560 POSITION 6,0:? "WELCOME!"
570 ? :? "To Caradian Castle I am your
host "
580 ? "Heraldor Are you New or are you"
590 ? "Revisiting ?";:GET #1,K
600 IF K=82 THEN 2190
610 IF K<>78 THEN 550
615 REM *** NEW CHARACTER ***
620 ? :? "What be thy name,stranger ";
630 INPUT NAME$:IF LEN(NAME$)>10 THEN ?
 "What do your friends call you ";:GOTO
 630
640 ST=INT(RND(1)*60)+10:DEX=INT(RND(1)
*73)+10:LV=1:LK=INT(RND(1)*6)+1:GD=INT(
RND(1)*2*LK)+10
650 HP=INT(RND(1)*10)+LK:XP=0:SP=0:WP=0
660 WP=0:ARM=0:SH=0:PO=0
665 REM *** SOOTHSAYER ***
670 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(561)*256:POKE DL+3,71:POKE DL+
6,7
680 POSITION (20-LEN(NAME$))/2,0:? NAME
$
690 ? :? "SUMMARY OF CHARACTER  "
700 POSITION 5,5:? "STRENGTH   ",ST,"/1
00"
710 POSITION 5,7:? "DEXTERITY  ",DEX,"/
100"
720 POSITION 5,9:? "LUCK       ",LK
730 POSITION 5,11:? "GOLD       ",GD
740 POSITION 5,13:? "HIT PTS    ",HP
750 POSITION 5,15:? "LEVEL      ",LV
760 POSITION 5,17:? "EXP PTS    ",XP
770 POSITION 0,21:? "Press [RETURN]";:G
ET #1,K
780 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(561)*256:POKE DL+3,71:POKE DL+
6,7
790 POSITION (20-LEN(NAME$))/2,0:? NAME
$
800 ? :? "KNOWN SPELLS  ":? :?
810 IF SP=0 THEN ? :? "NONE":GOTO 890
820 FOR I=1 TO SP:? "          ",SPELL$((I-
1)*10+1,I*10):? :NEXT I
830 POSITION 0,21:? "Press [RETURN]";:G
ET #1,K
840 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(561)*256:POKE DL+3,71:POKE DL+
6,7
850 POSITION (20-LEN(NAME$))/2,0:? NAME
$
860 ? :? "WEAPON  ";:IF WP=0 THEN ? "NO
NE":GOTO 880
870 ? WP$((WP-1)*20+5,(WP-1)*20+20)
880 ? :? "ARMOUR  ";:IF ARM=0 THEN ? "N
ONE":GOTO 900
890 ? ARM$((ARM-1)*16+5,(ARM-1)*16+16)
900 ? :? "SHIELD  ";
910 IF SH=0 THEN ? "NONE":GOTO 930
920 ? SH$((SH-1)*16+5,(SH-1)*16+16)
930 ? :? "POTIONS ";:IF PO=0 THEN ? "NO
NE":GOTO 950
940 ? PO
950 POSITION 0,21:? "Press [RETURN] ";:
GET #1,K
955 REM *** GAME CENTRE ***
960 TRAP 960:GRAPHICS 0:SETCOLOR 2,0,0:
DL=PEEK(560)+PEEK(561)*256:POKE DL+3,71
:POKE DL+6,7
970 POSITION 5,0:? "courtyard"
975 REM *** WORD 'COURTYARD' INVERSE **
*
980 ? "From here you may visit"
990 ? :? "1)  Castor,Soothsayer He will
 reveal":? "     your personality "
1000 ? :? "2)  Danito,greatest of the w
hite"
1010 ? "     witches and expert in heali
ng "
1020 ? :? "3)  Xonthar Retired swordsma
n now a"
1030 ? "     master smith "
1040 ? :? "4)  Laurenth A hard-but fair
 treasure"
1050 ? "     and equipment buyer "
1060 ? :? "5)  RADRO Leave the castle g
o forth"
1070 ? "     to fame and wealth   or dea
th!"
1080 ? :? "6)  Temporarily leave the ga
me "
1090 POSITION 2,20:? "Which do you choo
se (1-6)";:GET #1,K
1100 K=K-48:IF K<1 OR K>6 THEN ? CHR$(2
53);:GOTO 1090
1110 ON K GOTO 670,1120,1310,1720,1970,
2000
1115 REM *** WITCH ***
1120 GRAPHICS 0:SETCOLOR 2,0,0:POSITION
 17,0:? "Danito "
1130 ? :? "In return for a small off
ering"
1140 ? :? "I will give you potions,made
 from"
1150 ? :? "the rarest of substances "
1160 POSITION 5,10:? "How much will you
 donate ";:INPUT I
1170 I=INT(ABS(I)):IF I=0 THEN 960
1180 J=INT(RND(1)*10)+1:J=INT(J+LK*RND(
1)):IF J=0 THEN J=1
1190 IF I<J OR I>GD THEN ? :? "Begone,S
coundrel !!":FOR I=1 TO 500:NEXT I:GOTO
 960
1200 POKE 752,1:FOR L=1 TO INT(I/J):ON
INT(RND(1)*4)+1 GOTO 1210,1230,1250,127
0
1210 POSITION 2,15:? "A mixture of Luce
rne for strength ":ST=ST+INT(RND(1)*LK)
+1:IF ST>100 THEN ST=100
1220 GOTO 1280
1230 POSITION 2,15:? "Cayenne,for a fas
ter swordsman ":DEX=DEX+INT(RND(1)*LK)+1
:IF DEX>100 THEN DEX=100
1240 GOTO 1280
1250 POSITION 2,15:? "Asafetida A luck-
bringer ":LK=LK+1:IF LK>6 THEN LK=6
1260 GOTO 1280
1270 POSITION 2,15:? "Comfrey root,for
```

```
healing " PO=PO+INT(RND(1)*3)+1 IF PO>9
 THEN PO=9
1280 FOR K=1 TO 500 NEXT K
1290 POSITION 2,15 FOR K=1 TO 40 ? " ",
 NEXT K NEXT L
1300 GD=GD J GOTO 960
1305 REM *** SMITH ***
1310 GRAPHICS 0 SETCOLOR 2,0,0 POSITION
 14 0 ? "Mastersmith "
1320 ? ? "Since you can only use 1 swo
rd shield"
1330 ? ? "or suit of armour at one tim
e I will"
1340 ? ? "only sell you what you do no
t have "
1350 IF WP<>0 THEN 1430
1360 ? ? "First, a sword  " POKE 752,1
 ?
1370 FOR I=0 TO 7 ? I+1," > ",WP$(I*20+
1 I*20+20) NEXT I
1380 POSITION 2,22 ? "Which one sire ",
 GET #1 K K=K-48 IF K<0 OR K>8 THEN 138
0
1390 IF K=0 THEN 1430
1400 I=(K 1)*20+1 NAME2$=WP$(I,I+2) J=V
AL(NAME2$)
1410 IF GD<J THEN 1380
1420 GD=GD J WP=K
1430 POSITION 2,22 ? "Press [RETURN]",
GET #1 K
1440 IF ARM<>0 THEN 1530
1450 ? CHR$(125) POSITION 14,0 ? "Maste
rsmith "
1460 ? ? ? "Some Armour   " ?
1470 FOR I=0 TO 4 ? I+1," > ",ARM$(I*16
+1 I*16+16) NEXT I
1480 POSITION 2 22 ? "Which suit ", GET
 #1 K K=K 48 IF K<0 OR K>5 THEN 1480
1490 IF K=0 THEN 1530
1500 I=(K 1)*16+1 NAME2$=ARM$(I,I+2) J=
VAL(NAME2$)
1510 IF GD<J THEN 1480
1520 GD=GD-J ARM=K
1530 POSITION 2,22 ? "Press [RETURN]",
GET #1 K
1540 ? CHR$(125) POSITION 14,0 ? "Maste
rsmith "
1550 IF SH<>0 THEN 1630
1560 ? ? "A shield,perhaps  " ?
1570 FOR I=0 TO 2 ? I+1," > ",SH$(I*16+
1 I*16+16) NEXT I
1580 POSITION 2,22 ? "Which one ", GET
#1 K K=K 48 IF K<0 OR K>2 THEN 1580
1590 IF K=0 THEN 1630
1600 I=(K 1)*16+1 NAME2$=SH$(I,I+2) J=V
AL(NAME2$)
1610 IF GD<J THEN 1580
1620 GD=GD J SH=K
1630 POSITION 2 22 ? "Press [RETURN]",
GET #1 K
1640 GOTO 960
1645 REM *** TREASURE EXCHANGER ***
1720 GRAPHICS 0 SETCOLOR 2 0 0 POSITION
 15 0 ? "Treasurer " ? ?
1730 IF WP=0 THEN 1810
1740 I=WP*5+INT(LK*RND(1))
1750 ? "Your sword   I offer ",I
1760 POSITION 5 22 ? "Accepted (Y/N) "
 GET #1 K
1770 IF K=78 OR K<>89 THEN 1790
1780 WP=0 GD=GD+I
1790 POSITION 2 22 ? "Press [RETURN]
", GET #1 K
1800 ? CHR$(125) POSITION 15,0 ? "Treas
urer " ? ?
1810 IF ARM=0 THEN 1890
1820 I=SH*7+INT(LK*RND(1))
1830 ? "Your armor   I offer ",I
1840 POSITION 5,22 ? "Accepted (Y/N) ",
 GET #1 K
1850 IF K=78 OR K<>89 THEN 1870
1860 ARM=0 GD=GD+I
1870 POSITION 2,22 ? "Press [RETURN]
", GET #1 K
1880 ? CHR$(125) POSITION 15,0 ? "Treas
urer " ? ?
1890 IF SH=0 THEN 1950
1900 I=SH*2+INT(LK*RND(1))
1910 ? "Your shield   I offer ",I
1920 POSITION 5,22 ? "Accepted (Y/N) ",
 GET #1 K
1930 IF K=78 OR K<>89 THEN 1950
1940 SH=0 GD=GD+I
1950 POSITION 2,22 ? "Press [RETURN]
", GET #1 K
1960 GOTO 960
1965 REM *** HERE WE GO!!! ***
1970 POKE 752,1 ? CHR$(125),"FORWARD,",
NAME$,"!"
1980 OPEN #2 8 0 "D NAME DAT" PRINT #2,
NAME$ CLOSE #2
1990 FLAG=1 GOTO 2040
1995 REM *** ENDGAME ***
2000 ? CHR$(125) POSITION 7 0 ? "LEAVE"
2010 ? ? "Do you wish ",NAME$," to be"
2020 ? ? "placed in the INN for the du
ration ",
2030 GET #1 K IF K=78 OR K<>89 THEN 211
0
2040 NAME2$="D "
2050 NAME2$(3)=NAME$
2060 OPEN #2 8 0 NAME2$
2070 ? #2,ST ? #2,DEX ? #2,LK ? #2,HP ?
 #2,LV ? #2,XP
2080 ? #2,WP ? #2,ARM ? #2,SH ? #2,PO ?
 #2,SP ? #2,GD ? #2,PO
2090 CLOSE #2
2100 IF FLAG=1 THEN RUN "D MAZE BAS"
2110 TRAP 2120 XIO 33 #2 0,0,"D NAME DA
T"
2120 GRAPHICS 0 SETCOLOR 2,0,0 POSITION
 15 0 ? "GAME ENDED" ? ? END
2124 REM *** RESTORE CHARACTER ***
2126 REM ***     FROM DISK      ***
2130 GRAPHICS 0 SETCOLOR 2,0,0 ? "Your
name sire ", INPUT NAME$ IF LEN(NAME$)>
10 THEN 2130
2140 ? NAME$,",eh ?"
2150 ? ? "One moment, lord     "
2160 NAME2$="D "
2170 NAME2$(3)=NAME$ TRAP 2190
2180 OPEN #2 4 0 NAME2$ GOTO 2200
2190 ? ? "Thy name is not known here "
 CLOSE #2 FOR I=1 TO 500 NEXT I GOTO 55
0
2200 INPUT #2,ST INPUT #2,DEX INPUT #2,
LK INPUT #2,HP INPUT #2,LV INPUT #2,XP
INPUT #2,WP
2210 INPUT #2,ARM INPUT #2,SH INPUT #2,
PO INPUT #2,SP INPUT #2,GD INPUT #2,PO
CLOSE #2
2220 ? "Welcome back,my lord Please ste
p into"
2230 ? "the castle "
2240 POSITION 2,22 ? "Press [RETURN]",
GET #1,K GOTO 670
2245 REM *** PHEW !!! ***
```

```
100 REM ************************
110 REM *                      *
120 REM * RADRO - UNDERGROUND *
130 REM *  BY MARC FREEBURY    *
140 REM *                      *
150 REM ************************
160 DIM NAME$(20) NAME2$(30) GEN$(20) A
(20 20) RATE$(120) STU(6) DUX(6) MAG(6)
 HIP(6) MONS$(110)
170 MONS$="URC         BRIGAND   DRUID
  GOBBLAR   TROLL      VAMPIRE    MEDUSA
   DEMON V   LICH LVL 9DRAGON     "
180 RATE$="BUMPKIN    PEASANT    AMATEUR
  SWORDSMAN ADVENTURERKNIGHT    SLAYER
   RADROIST  HERO       DEMI-GOD  "
190 RATE$(101)="GOD-TYPE 1"
200 OPEN #1,4,0,"D NAME DAT" INPUT #1,N
AME$ CLOSE #1
205 REM *** MUST LOAD CHARACTER ***
210 NAME2$="D " NAME2$(3)=NAME$
220 OPEN #2 4 0 NAME2$ OPEN #1 4,0,"K "
230 INPUT #2,ST INPUT #2,DEX INPUT #2,L
K INPUT #2,HP INPUT #2,LV INPUT #2,XP I
NPUT #2,WP
240 INPUT #2,ARM INPUT #2,SH INPUT #2,P
O INPUT #2,SP INPUT #2,GD INPUT #2,PO C
LOSE #2
250 HP2=HP ST2=ST DEX2=DEX
255 REM *** DRAW FRONT PAGE ***
260 GRAPHICS 8 SETCOLOR 2 0 0 COLOR 1 S
ETCOLOR 1 0 0
270 PLOT 100,160 DRAWTO 100,20 DRAWTO 2
40 20 DRAWTO 240,160 DRAWTO 170,90 DRAW
```

```
10 100 160
280 POKE 709,12 POKE 752,1 ? CHR$(125),
"          ** THE ENTRANCE **"
290 ? "                  ",NAME$
300 FOR I=1 TO 1500 NEXT I GOTO 560
305 REM *** FAST MAZE PLOTTER ***
310 I=0 X1=0 Y1=0 XVEC=60 YVEC=32 XL=X
YL=Y
320 ON DIR GOTO 330,340,350,360
330 XL=X-I YL=Y+I GOTO 370
340 XL=X+I YL=Y+I GOTO 370
350 XL=X+I YL=Y-I GOTO 370
360 XL=X-I YL=Y-I
370 IF A(XL,YL)=0 THEN 400
380 PLOT X1,Y1+YVEC DRAWTO X1+XVEC,Y1+Y
VEC DRAWTO X1+XVEC,Y1+YVEC*4 DRAWTO X1,
Y1+YVEC*4
390 GOTO 410
400 PLOT X1,Y1 DRAWTO X1+XVEC,Y1+YVEC D
RAWTO X1+XVEC,Y1+YVEC*4 DRAWTO X1,Y1+YV
EC*5
410 ON DIR GOTO 420,430,440,450
420 XL=X+I YL=Y+I GOTO 460
430 XL=X+I YL=Y-I GOTO 460
440 XL=X-I YL=Y-I GOTO 460
450 XL=X-I YL=Y+I
460 IF A(XL,YL)=0 THEN 490
470 PLOT 319-X1,Y1+YVEC DRAWTO 319-X1-X
VEC,Y1+YVEC DRAWTO 319-X1-XVEC,Y1+YVEC*
4 DRAWTO 319-X1,Y1+YVEC*4
480 GOTO 500
490 PLOT 319-X1,Y1 DRAWTO 319-X1-XVEC,Y
1+YVEC DRAWTO 319-X1-XVEC,Y1+YVEC*4 DRA
WTO 319-X1,Y1+YVEC*5
500 X1=X1+XVEC Y1=Y1+YVEC XVEC=XVEC/2 Y
VEC=YVEC*0.6
510 XL=X+(DIR=2)*(I+1)-(DIR=4)*(I+1) YL
=Y+(DIR=1)*(I+1)-(DIR=3)*(I+1)
520 IF I<3 AND A(XL,YL)>0 THEN I=I+1 GO
TO 320
530 IF A(XL,YL)>0 THEN RETURN
540 PLOT X1,Y1 DRAWTO 319-X1,Y1 PLOT X1
,160-Y1 DRAWTO 319-X1,160-Y1
550 RETURN
560 NAME2$="D "
565 REM *** OLD LEVEL ? ***
570 GRAPHICS 0 SETCOLOR 2,0,0 POSITION
15,0 ? "Doorwarden " ? ?
5 0 ? "Doorwarden " ? ?
580 ? "Do you wish to enter a saved lev
el ", GET #1,K
590 IF K=78 THEN 690
600 IF K<>89 THEN 570
610 ? ? "Name of this stored level ",
INPUT GEN$
620 NAME2$(3)=GEN$
630 TRAP 650
640 OPEN #2,4,0,NAME2$ GOTO 660
650 CLOSE #2 GOTO 610
660 FOR I=1 TO 20 FOR J=1 TO 20 INPUT #
2,Z A(I,J)=Z NEXT J NEXT I
670 INPUT #2,X INPUT #2,Y INPUT #2,DIR
CLOSE #2
680 TRAP 40000 GOTO 770
684 REM *** ULTRA COMPLEX MAZE ***
686 REM ***     GENERATOR!!!     ***
690 ? CHR$(125) POKE 752,1 POSITION 16,
0 ? "WAIT" Z=320
700 FOR I=1 TO 20 A(I,1)=0 A(I,20)=0 A(
20,I)=0 A(1,I)=0 NEXT I
710 FOR I=2 TO 19 FOR J=2 TO 19 POSITIO
N 21,0 ? Z," " Z=Z-1
720 X=INT(RND(1)*14) IF X>9 THEN X=0
730 IF X<>0 AND RND(1)<0.75 THEN X=1
740 A(I,J)=X NEXT J NEXT I
750 X=INT(RND(1)*17)+2 Y=INT(RND(1)*17)
+2 DIR=INT(RND(1)*4)+1 IF A(X,Y)<>1 T
HEN 750
760 A(X,Y)=9
765 REM *** RE-ENTRY POINT ALWAYS ***
770 GRAPHICS 8 SETCOLOR 2,0,0 COLOR 15
IF A(X,Y)<>5 THEN GOSUB 310
780 ? CHR$(125) POKE 752,1
790 ? " W    STRENGTH ",ST2,"  DEXTERIT
Y ",DEX2,"  "
800 ? "A D   HIT PTS  ",HP2,"  TREASURE
 ",GD
810 GET #1,K
815 REM *** IF TURN DO IT ***
820 IF K=ASC("A") THEN DIR=DIR-1 DIR=DI
R+(DIR=0)*4 GOTO 770
830 IF K=ASC("D") THEN DIR=DIR+1 DIR=DI
R-(DIR=5)*4 GOTO 770
840 IF K<>ASC("W") THEN 810
850 XL=X+(DIR=2)-(DIR=4) YL=Y+(DIR=1)-(
DIR=3)
855 REM *** HIT A WALL,TWIT! ***
860 IF A(XL,YL)=0 THEN ? CHR$(125),"
                    OUCH!" ? CHR$(253) FOR I
=1 TO 500 NEXT I GOTO 780
870 X=XL Y=YL
880 IF A(X,Y)=1 OR A(X,Y)=5 THEN 770
890 IF A(X,Y)<>4 THEN 960
895 REM *** NIT FALLS DOWN HOLE! ***
900 ? CHR$(125),"                *** A PIT!
***"
910 FOR I=0 TO 255 SOUND 0,I,10,15-INT(
I/16) NEXT I
920 ST2=ST2-INT(RND(1)*5)+1 HP2=HP2-INT
(RND(1)*3) IF ST2<0 THEN ST2=0
930 FOR I=1 TO 500 NEXT I
940 IF HP2<0 THEN 2210
950 GOTO 770
955 REM *** I FEEL DIZZY      ***
960 IF A(X,Y)<>8 THEN 980
970 DIR=INT(RND(1)*4)+1 GOTO 770
980 IF A(X,Y)<>9 THEN 1250
985 REM *** YIPPEE! WAY OUT   ***
990 ? CHR$(125),"Stairway out Do you wi
sh to leave Y/N", GET #1,K
1000 IF K<>89 AND K<>78 THEN 990
1010 IF K=78 THEN 770
1020 GRAPHICS 0 SETCOLOR 2,0,0 ? "YOU S
URVIVED!!"
1030 ? ? ? "Current gold is ",GD
1040 ? ? "Current experience is ",XP
1050 XPE=100 IF LV=1 THEN 1070
1060 FOR I=1 TO LV-1 XPE=XPE+XPE NEXT I
1070 IF XP>XPE THEN LV=LV+1 XP=0 HP=HP+
INT(RND(1)*10)*LV ? ? "You have made i
t to level ",LV
1080 ? ? "Rating is  ",
1090 Z=INT(XP/1000) IF Z>10 THEN ? "TOO
 GOOD!" GOTO 1110
1100 ? RAT$(Z*10+1,Z*10+10)
1110 POSITION 2,20 ? "PRESS [RETURN]",
GET #1,K
1120 GRAPHICS 0 SETCOLOR 2,0,0 POSITION
 15,0 ? "Doorwarden " ? ?
1130 ? "Do you wish to save this level
", GET #1,K
1140 IF K<>89 AND K<>78 THEN 1120
1150 IF K<>89 THEN 1210
1160 ? ? "Name of this stored level ",
INPUT GEN$
1170 NAME2$="D " NAME2$(3)=GEN$
1180 OPEN #2,8,0,NAME2$
1190 FOR I=1 TO 20 FOR J=1 TO 20 Z=A(I,
J) PRINT #2,Z NEXT J NEXT I
1200 PRINT #2,X PRINT #2,Y PRINT #2,DIR
 CLOSE #2
1205 REM *** DUMP CHARACTER ***
1210 ? CHR$(125) NAME2$="D " NAME2$(3)=
NAME$ OPEN #2,8,0,NAME2$
1220 PRINT #2,ST PRINT #2,DEX PRINT #2,
LK PRINT #2,HP PRINT #2,LV PRINT #2,XP
PRINT #2,WP
1230 PRINT #2,ARM PRINT #2,SH PRINT #2,
PO PRINT #2,SP PRINT #2,GD PRINT #2,PO
CLOSE #2
1240 RUN "D CASTLE BAS"
1245 REM *** HELLO,WHAT'S THIS ? ***
1250 IF A(X,Y)<>7 THEN 1430
1260 A(X,Y)=1 RESTORE 1340 Z=INT(RND(1)
*INT(XP/1000)) IF Z>9 THEN 1260
1270 FOR I=1 TO Z READ NAME2$,TGP,MAG,S
TU,DUX NEXT I
1280 ? CHR$(125),"You have found ",NAME
2$, IF TGP>0 THEN ? " worth ",TGP," GP"
 GP=GP+TGP
1290 ? IF MAG>0 THEN ? "You gain magic
al ability" SP=SP+INT(RND(1)*LK) IF SP>
4 THEN SP=4
1300 IF STU>0 THEN ? "You feel stronger
" ST2=ST2+INT(RND(1)*(X/1000))
1310 IF DUX>0 THEN ? "Your armour feels
 weightless." DEX=DEX+INT(RND(1)*(ST/10
))
1320 ? "Press [RETURN]", GET #1,K
1330 GOTO 770
1334 REM *** LIST OF OBJECTS-CAN ***
1336 REM ***  BE EXTENDED BY YOU ***
```

```
1340 DATA Magic Scrolls,0,1,0,0
1350 DATA Loose Coins,2,0,0,0
1360 DATA A Green Potion,0,0,1,0
1370 DATA A Blue Potion,0,0,0,1
1380 DATA A Ring,3,1,0,0
1390 DATA A carved Figure,2,0,0,0
1400 DATA Gemstones,4,0,0,0
1410 DATA Fragrant oils,0,0,1,1
1420 DATA A rod,0,1,0,1
1424 REM *** UP! WHAT'S THAT    ***
1426 REM *** DARK NASTY SHADOW? ***
1430 GRAPHICS 0 SETCOLOR 2,0,0 POKE 752
,1
1440 TGP=INT(RND(1)*(LV/2))+INT(RND(1)*
3) IF TGP<1 THEN TGP=1
1450 IF TGP>6 THEN TGP=6
1460 TGP2=TGP GOLD=0 XPE=0
1470 FOR I=0 TO TGP-1 MONS=INT(RND(1)*L
V)+1+INT(RND(1)*2) IF MONS>10 THEN MONS
=10
1480 RESTORE 2180 GOLD=GOLD+INT(RND(1)*
(MONS)) XPE=XPE+MONS*50
1490 FOR J=1 TO MONS READ STU STU(I+1)=
STU READ DUX DUX(I+1)=DUX READ MAG MAG(
I+1)=MAG READ HIP HIP(I+1)=HIP
1500 NEXT J MONS=MONS 1 NAME2$(I*10+1,I
*10+10)=MONS$(MONS*10+1,MONS*10+10) NEX
T I
1510 ? "You Have Come Upon  "
1520 POSITION 2,2 ? "GROUP   NAME   STA
TUS"
1530 FOR I=0 TO TGP-1 ? "  ",I+1,"    "
,NAME2$(I*10+1,I*10+10), POSITION 18,I+
3 IF HIP(I+1)>0 THEN ? "ALIVE  "
1540 IF HIP(I+1)<=0 THEN ? "DEAD  "
1550 NEXT I
1560 IF RND(1)>0 65 THEN POSITION 2 20
? "The Enemy Have The Advantage  " GOTO
 1930
1570 POSITION 2 20 ? "Your Options   1)
 FIGHT 2) WITHDRAW" POSITION 17,21 ? "3
) SPELL 4) BARGAIN"
1580 POSITION 17 22 ? "5) DRINK POTION"
1590 POSITION 2 23 ? "Your Option ", GE
T #1 K
1600 IF K<49 OR K>53 THEN 1590
1610 POSITION 0 20 FOR I=1 TO 15 ? "
    ", NEXT I
1620 K=K 48 ON K GOTO 1830,1810 1720 16
40 1650
1625 REM *** MAGIC POTION! ***
1630 IF PO=0 THEN 1940
1640 HP2=HP2+INT(RND(1)*10)+1 IF HP2>HP
 THEN HP2=HP
1650 GOTO 1940
1654 REM *** LOOK GUYS CAN'T WE ***
1656 REM ***    MAKE A DEAL ??   ***
1660 IF LV/10>RND(1) THEN 1940
1670 DAM=INT(RND(1)*5)*TGP2+1 IF DAM>GO
 THEN 1940
1680 POSITION 2 20 ? "You May Pass For
" DAM," Go Y/N",
1690 GET #1 K IF K<>89 AND K<>78 THEN 1
690
1700 IF K=89 THEN GO=GO-DAM GOTO 770
1710 GOTO 1940
1715 REM *** ZAPPEM!! ***
1720 POSITION 2,20 ? "Which Spell (1-4)
",
1730 GET #1 K K=K 48 IF K<1 OR K>4 THEN
 1730
1740 IF SP<K OR RND(1)>0 9 THEN SP=0 GO
TO 1950
1750 SP=SP K IF SP=1 THEN I=INT(RND(1)*
TGP)+1 HIP(I)=HIP(I)-INT(RND(1)*4)+1 GO
TO 1950
1760 IF S=2 THEN I=INT(RND(1)*TGP)+1 HI
P(I)=INT(RND(1)*4)+1 GOTO 1950
1770 I=INT(RND(1)*3) 1 J=INT(RND(1)*3)-
1 A(X+I,Y+J)=1 GOTO 770
1780 X=INT(RND(1)*17)+2 Y=INT(RND(1)*17
)+2 IF A(X,Y)<>1 THEN 1780
1790 GRAPHICS 2 SETCOLOR 2,0,0 POKE 752
 1 POSITION 9,6 ? #6,"GO!"
1800 FOR I=255 TO 0 STEP -1 SOUND 0,I,0
 8 NEXT I SOUND 0,0 0,0 GOTO 770
1810 IF RND(1)>0 7 THEN POSITION 2,20 F
OR I=1 TO 10 ? "                 ", NEXT I
GOTO 1930
1820 GOTO 770
1824 REM *** THE FOOL'S TRYING ***
1826 REM *** TO FIGHT IT OUT!  ***
1830 POSITION 2,21 ? "Against Which Gro
up ", GET #1 K
1840 K=K-48 IF K<1 OR K>TGP OR HIP(K)<=
0 THEN 1830
1850 POSITION 2,20 FOR I=1 TO 10 ? "
        ", NEXT I
1860 DAM=INT(RND(1)*100)+INT(XP/1000)
1870 IF DAM<DUX(K) THEN POSITION 2,20 ?
 "Your Stroke Goes Wide!" FOR I=1 TO 20
0 NEXT I GOTO 1930
1880 DAM=INT(RND(1)*100)
1890 IF DAM<STU(K) THEN POSITION 2,20 ?
 "THE ",NAME2$((K-1)*10+1,(K-1)*10+10),
" Defends!" GOTO 1930
1900 DAM=INT(RND(1)*WP*2*LV)+1 DAM=DAM+
(WP=6)+(WP=7) DAM=DAM+(WP=7 AND RND(1)>
0 95)*100+(WP=8)*DAM
1910 POSITION 2,21 ? "You Strike For ",
DAM," points!" HIP(K)=HIP(K)-DAM
1920 IF HIP(K)<=0 THEN POSITION 2,22 ?
"The ",NAME2$((K-1)*10+1 (K-1)*10+10),"
 is dead!" TGP2=TGP2 1
1930 FOR I=1 TO 150 NEXT I
1940 POSITION 0,20 FOR I=1 TO 15 ? "
      ", NEXT I
1950 IF TGP2=0 THEN GOTO 2120
1960 FOR I=0 TO TGP-1 IF HIP(I+1)<=0 TH
EN 2100
1970 DAM=INT(RND(1)*100)
1980 POSITION 2 20 ? "The ",NAME2$(I*10
+1 I*10+10)," strikes   ",
1990 IF RND(1)<0 75 OR MAG(I)=0 THEN 20
40
2000 ? "with a thunderbolt!" FOR J=1 TO
 150 NEXT J
2010 DAM=INT(RND(1)*MAG(I))+1 MAG(I)=MA
G(I)-DAM HP2=HP2 DAM
2020 IF HP2<=0 THEN 2210
2030 POSITION 2 20 FOR J=1 TO 5 ? "
   ", NEXT J GOTO 2110
2040 HPG=INT(DEX2/10)+ARM*4 IF DAM<HPG
 THEN ? "but misses!", FOR J=1 TO 100 N
EXT J GOTO 2100
2050 IF RND(1)*100+LV*4<512 THEN ? "you
 defend!" FOR J=1 TO 100 NEXT J GOTO 21
00
2060 DAM=INT(RND(1)*(STU(I+1)/3))+1 DAM
=DAM INT(RND(1)*(ARM*4)) IF DAM<1 THEN
DAM=1
2065 REM *** OWWWWWWWWW!! ***
2070 ? "and hits for " DAM " points!"
2080 FOR J=1 TO 150 NEXT J
2090 HP2=HP2 DAM IF HP2<=0 THEN GOTO 22
10
2100 POSITION 0 20 FOR J=1 TO 15 ? "
   " NEXT J
2110 NEXT I GOTO 1520
2114 REM *** CAN I OPEN MY EYES ***
2116 REM ***       NOW ?        ***
2120 ? CHR$(125), POSITION 13,9 ? "You
Survived!"
2130 ? ? ? "Searching the bodies of t
he fallen"
2140 ? "reveals ",GOLD " gold pieces!"
 GO=GO+GOLD
2150 ? ? "Experience points gained ",X
PE XP=XP+XPE
2160 POSITION 2 21 ? "PRESS [RETURN]"
GET #1 K
2170 A(X Y)=1 GOTO 770
2175 REM *** MONSTER ATTRIBUTES ***
2180 DATA 10,8 0,3 16 20,0,6,5,8,10,4
2190 DATA 10 10,0,10,30 10 0 20 60 40 ,
0 26
2200 DATA 64 36 34,31 85 06,43,43,80 37
 63 66 95 45 73 86
2204 REM *** ABANDON HOPE ALL YE ***
2206 REM ***   WHO ENTER HERE    ***
2210 GRAPHICS 0 SETCOLOR 2 0,0 POKE 752
 1 POSITION 18 10 ? "DEAD"
2220 POSITION INT((40-LEN(NAME$))/2), 12
 ? NAME$
2230 COLOR 160 PLOT 19,14 DRAWTO 19 20
DRAWTO 20 20 DRAWTO 20 14
2240 PLOT 16 16 DRAWTO 23,16 COLOR 42 P
LOT 0 0
2250 XIO 33 #2 0 0 "D NAME DAT"
2260 NAME2$="0 " NAME2$(3)=NAME$ XIO 33
 #2 0 0 NAME2$
2270 POSITION 2 0 POKE 752 0 END
```

sinclair special

6

sinclair & Macmillan ZX Spectrum LEARN TO READ 1
sinclair & Macmillan ZX Spectrum LEARN TO READ 2
sinclair & Macmillan ZX Spectrum LEARN TO READ 3
sinclair & Macmillan ZX Spectrum LEARN TO READ 4
sinclair & Macmillan ZX Spectrum LEARN TO READ 5
MAGNETS
CARGO
SPEECH MARKS
CASTLE SPELLERBUS
ALPHABET GAMES

Inside...

Setting new standards in educational software with Sinclair-Macmillan

Plus six other learning programs

TODAY, LEARNING IS A NEW GAME

Subsidised microcomputers are now commonplace as teaching aids for the very youngest children and the ZX Spectrum is prominent amongst those micros at use in schools

In the relatively short time that the Spectrum has been at work in the classroom, two questions have been answered Yes with the right software, the micro can and does teach effectively and thoroughly (and gives teachers more time to devote to individual pupils) Yes young children think little of working rapidly and successfully, with a screen and keyboard, on even quite complex subjects

In this Sinclair Special we reveal a range of educational software specifically designed to make full use of these advantages. The programs produced by Sinclair in collaboration with Macmillan Education are fascinating They deal imaginatively and most effectively with early reading skills and take a truly refreshing approach to basic science

In the Blackboard range we've programs which bring a light-hearted clarity to the tricky matters of spelling and punctuation

These programs are designed for use both at home and in the classroom Each program is accompanied by full documentation which gives parents helpful advice and guidance on the educational objectives

The programs covered on these pages represent only a fraction of the full and fast-growing list of Spectrum software Be assured we'll keep you in touch with new developments as they happen.

David Park

David Park
Education Marketing Manager

NEW WAYS TO LEARN WITH THE ZX SPECTRUM

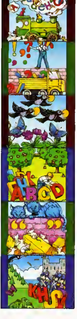
Programs from Blackboard Software

The new range of educational programs from Blackboard Software makes learning an enjoyable process by involving the child in a game which teaches as it entertains

Each program has a step-by-step example section and gives correct answers after a number of attempts Vocabulary changes can be made allowing each program to keep pace with the child's development. This flexibility can also be used in the classroom to cater for children of differing ability

The instructive and colourful games which follow the successful completion of each group of sentences provide useful practice in letter recognition and increase familiarity with the Spectrum keyboard

All programs are written for the 48K RAM Spectrum



Alphabet Games

Three games of letter recognition (using either upper or lower case) to help children learn the alphabet and find their way round the computer keyboard

Alphagaps – The full alphabet is displayed along with a second incomplete version The child must fill in the missing letters.

Random Rats – Press the letter key that is displayed on the gun to destroy the rats which have invaded the cellar!

Invaders – Stop little green men from landing on Earth by pressing the appropriate letter

Early Punctuation

While an animated matchstick man marches above displayed sentences the child must decide which punctuation mark is missing and where to insert it. At the touch of a key the matchstick man drops the mark into place. After successful completion of every sentence in the exercise, light relief comes in the form of a bottle-shooting game!

The Apostrophe

As each sentence is displayed, a bird appears with a worm in its beak. The keyboard is used to move the bird and drop the worm into the correct place for the apostrophe When ten sentences have been corrected the Grub Game is displayed Press the correct character to change the grub into a butterfly before it munches through a flower!

Capital Letters

A program to teach the use of capital letters. Sentences incorporating proper nouns and sentences without opening capitals are displayed The child inserts the correction by guiding an animated figure to the appropriate letter

For each correct answer an apple grows on a tree After ten correct answers the child's skills in recognising letters and using the Spectrum keyboard are needed to save the apples as they fall to the ground

Speech Marks

A comprehensive program including sentences with one or two sets of speech marks ("inverted commas") and exercises in both direct and reported speech

Using the Spectrum keyboard a cursor is used to guide speech marks to the correct position The program offers three levels of difficulty with full examples for each section Guide Max the mouse through a maze after the correct completion of five sentences from each section, but beware of Persian cats!

Castle Spellerous

A spelling game with ten levels of vocabulary including words with silent first letters double letters and other difficult words The Princess has been captured and carried off to Castle Spellerous Helped by ten soldiers the child can attempt a rescue by giving the right answers Part of a siege tower is built for each correctly spelt word Mistakes are costly – the wicked wizard appears as a vampire bat, turning the men into frogs butterflies and bats!

When ten words are spelt correctly the rescue begins and the wizard takes flight.

SINCLAIR + MACMILLAN: A NEW DIMENSION IN EDUCATIONAL PROGRAMS

Sinclair have joined forces with Macmillan Education to produce a completely new and different range of educational software. The results so far can be seen in these exceptional programs.

The Learn to Read series is derived from Macmillan Education's best-selling primary school reading scheme, Gay Way. It offers a unique opportunity for parents and teachers to participate in the child's first experience in reading.

Macmillan Education's Science Horizons is one of Britain's most successful school science schemes. Each program concentrates on key scientific ideas and, through simulation of real life, makes the learning process entertaining and enjoyable.

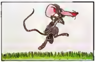
Learn to Read 1
Learn to Read 1 is designed for children who are just beginning to read. It is in four parts each of which develops skills central to the reading process – letter recognition, sight vocabulary, early spelling and memory. The program is full of colour and fun and children will enjoy learning to read as they meet the animal characters – Ben the dog, Jip the cat and their friends.

Learn to Read 2
Learn to Read 2 extends the fundamental reading skills practised in the first program, as well as encouraging logical thinking. The child's vocabulary is gradually built up as new words such as "red," "green," "car," "ship" and "bus" are introduced. In addition, Learn to Read 2 features an attractive "reward" system enabling children to see their achievements grow.

Learn to Read 3
Learn to Read 3 builds on the child's progress so far, so that he or she can gain the confidence to move on through the complex reading process. Learn to Read 3 features four different activities, all of which are colourful and lively. Further vocabulary is introduced until the child is reading more than 30 words.

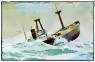
Learn to Read 4
Learn to Read 4 is the alphabet program in the Learn to Read series.

Using various stimulating activities the program gives the child plenty of practice in working with the alphabet – matching initial letters to words and pictures and spotting missing letters. These exercises build familiarity with simple sequences within the alphabet.



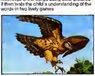
Learn to Read 5
Learn to Read 5 teaches positional language – often difficult to understand and remember – by using words and phrases such as "behind" and "in front of" "inside" and "outside".

The program first demonstrates the meanings of the words using clear pictures. It then tests the child's understanding of the words in two lively games.



Cargo
Set sail around the world. Choose your ports of call – New York, Tokyo, Belem, Helsinki – then the real challenge begins! You must reach your destinations safely, weathering storms on the way. But first, load your cargo – using all your knowledge and skill. Poor loading can mean capsizing and sinking. Your rank, if not your life, is always at stake!

Glider
Be a glider pilot! The glider models real-life gliding conditions so that you can learn through experience. As the pilot you must consider the time of day, the amount of cloud cover and the kind of terrain below you in order to find the up-currents of air that will keep you airborne. Try to fly as far as possible and, when you are high enough, navigate your way back to your home airfield and land safely – if you can.



Survival
Discover what it is like to be an animal in the wild! Be a lion stalking your prey, escaping human hunters. Or be a hawk, mouse or even a butterfly, searching for food and avoiding predators.

Survival models the natural world and brings to life hazards that different creatures must face in their struggle to stay alive.

Magnets
With an army of small magnets you set out to conquer the powerful supermagnets of your opponent. You have one weapon – your forces of magnetic attraction and repulsion.

The strategy is simple: attract smaller magnets to build strength to repel the supermagnet. When cornered, just turn your poles on your enemy and see what happens!

Learn to Read and Science Horizons programs are written for a 48K RAM Spectrum, and are supplied complete with comprehensive supporting documentation for parents and teachers.

ZX INTERFACE 2

THE NEW ROM CARTRIDGE AND JOYSTICK INTERFACE

Now available in shops

Loads programs instantly
Takes two joysticks
Just plug-in and play

The ZX Interface 2 is the latest new peripheral for the ZX Spectrum system It enables you to use new ZX ROM cartridge software plug-in programs that load instantly There are ten terrific games already available on cartridge ZX Interface 2 also allows you to use one or two standard joysticks without the need for separate special interfaces.

To use new ZX ROM Cartridge programs, just connect Interface 2 to the rear of your Spectrum or Interface 1 and plug in the cartridge of your choice Switch on and the program is then loaded, ready to run!

You can use any joystick that has a 9-way D plug Use one or two of them for extra fun with suitable ZX ROM cartridge or Sinclair cassette programs — or with dozens of other Spectrum programs

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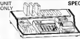

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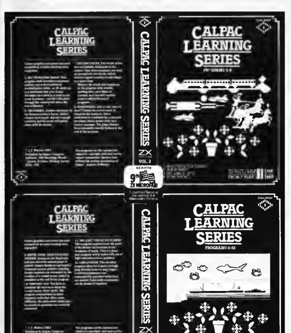
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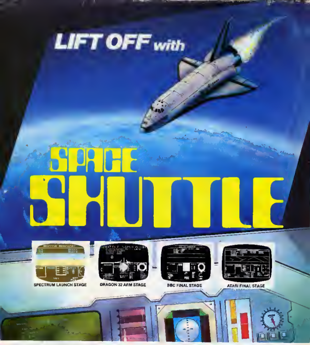
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